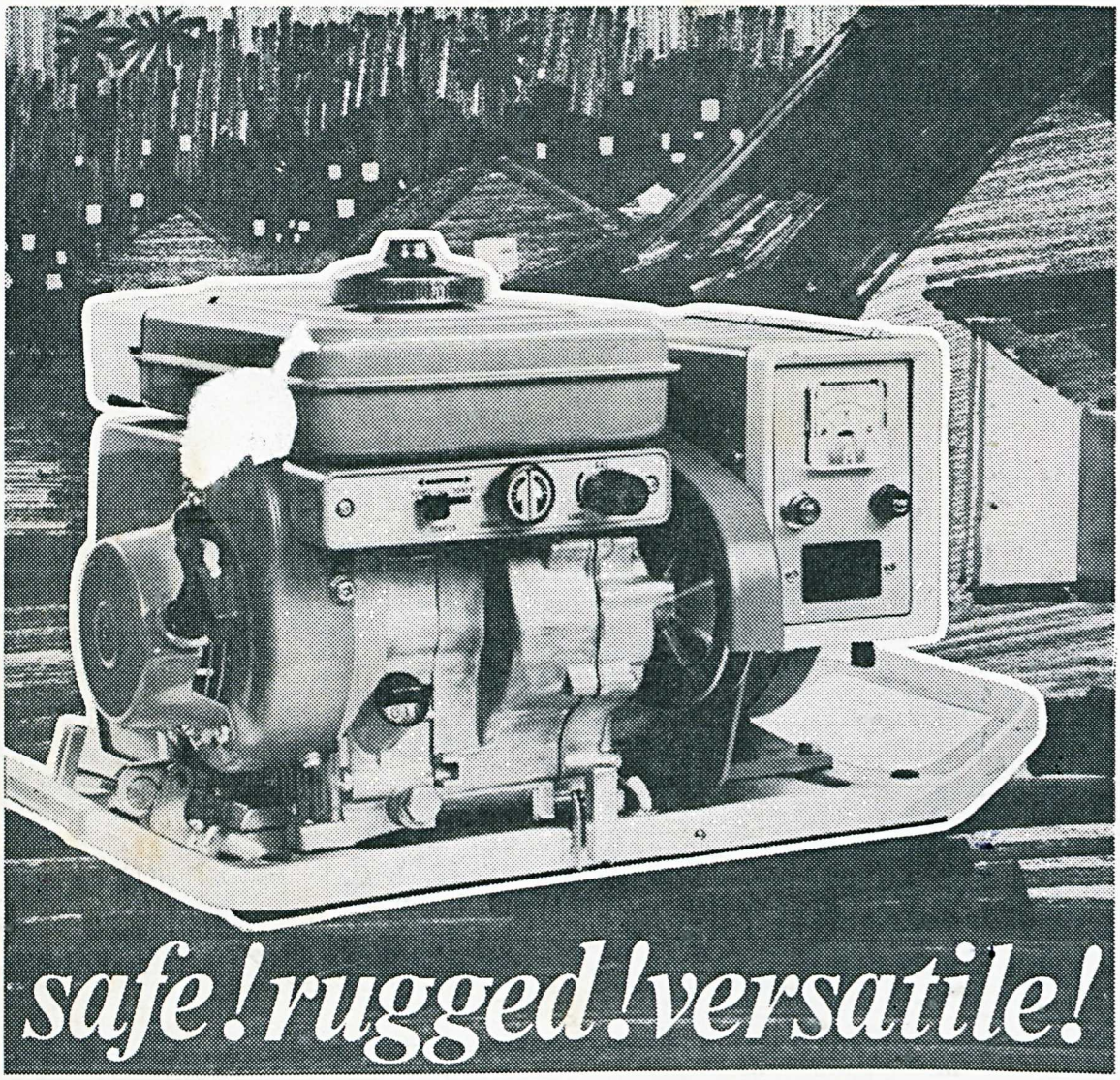
THE SERDANG SUN

76

1967/68

KDN 3140

KOLEJ PERTANIAN MALAYA



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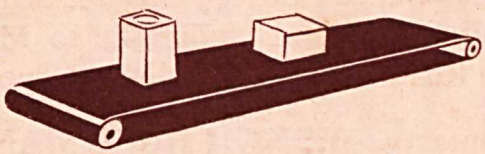

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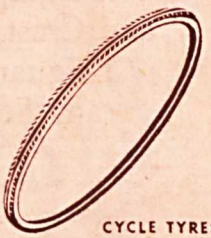

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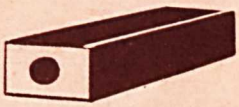

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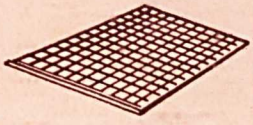

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CONTENTS

TO:
MR D.M. ELLISON

WITH THE COMPLIMENTS

OF

THE PUBLICATIONS COMMITTEE & STUDENTS

College of Agriculture Students' Union

Serdang, Selangor,

Malaysia.

PRINCIPAL'S MESSAGE

The College of Agriculture remains unique as an educational institution of national reputation. Since its founding in 1931, it has provided technical training in agriculture so well that an indifferent public has become convinced that agriculture is important and worthwhile backing. Today agriculture is of paramount importance to the nation as highlighted by the vast agricultural development programme under the First Malaysia Plan. This development has completely enveloped us in recent years, and first among its far reaching and possibly amazing effects is the unlimited new opportunities which abound for those who are willing to meet the rigid demands it imposes.

In an age where agriculture is becoming increasingly scientific, to achieve success in the role of a twentieth century technological missionary — the role that our graduates is called upon to play — our graduates must be both willing and able to act decisively, constructively and purposefully for a better agriculture, a better community and a better nation. This requires the agricultural technicians to possess not only technical proficiency of the highest standard but also dedication and character of the highest quality.

In this College we aspire fervently to disseminate scientific knowledge and to penetrate the barriers which hinder advancement in agriculture; at the same time we spare no efforts in exploring and developing fully the potentialities and capabilities of every student. Whole-hearted encouragement is therefore given to extra-curricular activities which are organised by the Students' Union whose varied activities throughout the year contribute in no small measure towards developing the potentialities of its members. I congratulate the organisers of these activities for another eventful year and wish the College of Agriculture Students' Union and its publication, the 'Serdang Sun' every success.

Yours sincerely,

(Dr. Mohd. Rashdan bin Baba)
Principal
College of Agriculture, Malaya.

Farewell Remarks to the College of Agriculture Students — Professor T.T. Williams

During the more than 300 days I have been associated with the College of Agriculture as a Visiting Fulbright Professor in the Agricultural Economics discipline, there are a number of observations I have made relative to Malaysia in general and the College of Agriculture in particular. As a farewell gesture to the students with whom it has been my privilege to associate, I would like to share with them some of these observations. I would be the first to admit that a ten-month stay in Malaysia working and conversing with government officials, educators, students and farmers does not qualify me as an expert on Agriculture in Malaysia. But, as the saying goes, it is far, far better for one to have a firm anchor in general observations than to launch out on the troubled seas of thought based on unreliable statistics.

Malaysia is in an economic developing orbit and the eyes of the world are upon the professional and non-professional technicians responsible for launching and maintaining the space ship. It is an accepted fact that the College of Agriculture has and is playing an effective role in the training of agriculturists who are to keep the space ship headed toward its objective of a full and abundant life for the rural population. Just as important, the College of Agriculture has assumed the unique responsibility of training the future agriculturists who will be attuned to the needs and aspirations of rural people. It is out of this general observation that I anchor my farewell remarks to the student body.

There are four specific points the College staff and administration seem to be conveying to the students. First, the College curriculum mirrors a belief that the time has long passed when the Agriculturist can improve the plight of rural people without a scientific and practical foundation in the production and marketing of farm commodities. There is an apparent effort to give priority to immediate farm problems without minimizing the long term objective of national development. One gets the impression that the instructional and practical programs at the College are oriented around the concept that there is a need to train agriculturists who are in a position and qualified to assist farm people in understanding themselves as producers of food and fiber and as a significant entity in effectuating economic development schemes. Such programs as share farming, educational tours, field work, laboratory assignments and study projects are designed to help students understand the scientific and practical side of farming as a business.

Second, students are made to realize that when farmers produce more with a given unit of productive factors, the living standard of the nation is increased. In addition, the future agriculturists who are to keep the economic development space ship on course are taught that in a democracy the freedom of choice has a two-way edge and a wrong decision based on unreliable facts or no facts at all can destroy the confidence of the people with whom they are to serve. More important, agriculturists are imbued with the philosophy that gaining the confidence of farmers is prequisite to assisting farm people in gaining the better things of life.

Third, the future agriculturists are made aware of the importance of continuous education both for themselves and the farm people with whom they are to serve. Students are being taught that if they are to be effective in their job they must keep abreast of the latest developments in the various agricultural disciplines.

Fourth, the College views the farm and industrial sectors as an integral part of economic development. The development of both must be co-ordinated. One need not reside in Malaysia for an extended period to observe the progress in both the

industrial and agricultural sectors. Nor must one look too hard or long to visualize the national effort being made to increase food supply and decrease the rate of population growth. Unlike many countries, Malaysia has converted a potential population explosion into an economic development asset. The College curriculum is designed to get over to the students an understanding that what happens to the rate of population growth and food production will determine how well the people of Malaysia are fed and clothed. In the same breath, it appears to this observer that the College is saying to the future agriculturist that the migration of farm people to highly populated centres is not so much an inherent attraction to urban over rural living but a lack of basic infra-structure in rural areas designed to encourage and support a viable economy. The training of agriculturists to work with other agencies to overcome these disparities is what this observer views as one of the functions of the College of Agriculture — that is, the training of agriculturists to help rural people access their needs and develop programs to overcome them. The students are being told by the staff that they must motivate farm people to shorten the time lag between the exposure to and the acceptance of improved farm practices. This future agriculturist must be knowledgable of group dynamics for one prequisite to rural development is the active participation by rural people in farm co-operatives and associations.

These are my observations as to the role of the College on promoting rural development in Malaysia. This is what I gleam the staff and administration are teaching and doing as they go about their task of educationing. It has been a pleasure for me to have been associated with the College in preparing some of the future agriculturists for maintaining the economic development rocket as it speeds toward the realization of its objective.

MAJLIS KOLEJ PERTANIAN, MALAYA

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Tingkat 3, Safety Insurance Building,
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Setia Usaha Tetap,
Kementerian Pelajaran Malaysia,
Rumah Persekutuan,
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2. Enche Salim bin Mohd. Akib,
19-A Lorong Puteri,
Off Jalan Pegawai,
Alor Star, Kedah.

3. Enche Lew Sip Hon,
Timbalan Pengawal Pusat Penyelidekan Getah Malaya,
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Off Jalan Imbi,
Kuala Lumpur.

2. Tuan Haji Hamdan bin Shaikh Tahir,
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Kementerian Pelajaran,
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Pengarah
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47B, Jalan Tampoi,
Tampoi, Johore.

Pengetua, Kolej Pertanian, Malaya
Dr. Mohd. Rashdan bin Baba — *Setia Usaha*

Ex-Officio: Dr. J.H.E. Griffiths,
Naib-Chancellor,
Universiti Malaya,
Lembah Pantai,
Kuala Lumpur.

ERRATA I

P. 7, STAFF LIST — Addition: Mr. Wan Chee Keong, Dip. Agric. (Mal).
— Inche Mohd. Ismail a/k Ahmad, B. Agric. Sc. (Mal).
— Mr. Chin Hoong Fong, B. Agric. Sc. (Melb).

P. 9, 21st STUDENTS' COUNCIL — "Literary and Social Secretary" should read "Social and Cultural Secretary".

P. 22, 1st para., 1st line — "nutrient statue" should read "nutrient status".
1st para., 2nd line — "In actual act" should read "In actual fact".
last para., heading — "SANDAY SOIL" should read "SANDY SOIL".

P. 37, last para., 2nd line — "be able to tame" should read "be able to name".
2nd last para., 1st line — "The Giant Honeybee, Apis dorsat" should read "The Giant Honeybee, Apis dorsata". "This is one of the most polific" should read "This is one of the most prolific".

P. 38, 2nd para., last line — "in the medical field as venicle" should read "in the medical field as vehicle".

P. 45, A Professional Farmer's view on vegetable gardening — author is Lai Wan Chee.
last para., 2nd last line — "More wetting of the surface" should read "mere wetting of the surface".

P. 84, Artificial Insemination (Photo.) — "By means of artificial penis" should read "By means of artificial vagina".

P. 88, 1st Photo. — "Three of our college dancers posed for our photographer after their during the 'Malam Bahasa' " should read "Three of our college dancers posing for our photographer after the 'Malam Bahasa' ".

P. 95, SPORTS COMMITTEE — "SPORTS COMMITTEE 1965/66" should read "SPORTS COMMITTEE 1967/68".
1st para. — should be "Lau Chen Chee — Selangor and Selangor under 23 — wing" and "Chong Wei Chong — Selangor under 23 — Fly half". The word "reserve" should be deleted.

COLLEGE OF AGRICULTURE, MALAYA

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Mr. Oh Beng Tatt, Dip.Agric.(Toronto)

Mr. Mak Tian Kwan, B.Sc. (Vet.Sc.&A.H.) (E. Pak.)

Mr. Lim Sok Ming QDAH (Aust.)

Mr. Tan Tuan Chong

Mr. M. A. Marques

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Mr. Yeow Kheng Hoe, B.Agric. Sc. (Cant. N.Z.)

Mr. Khoo Beng Lee, B. Agric.Sc.(Mal.)

Mrs. Dorothy De Lessio, B.Hons.Econ.

The Editorial

The time has come for the Serdang Sun to shed its light on CASU's activities and achievements.

The sessions 1967/68 sees much progressive changes in various facets of students' life in the Serdang campus. What with the completion of two new hostels, two lecture theatres and a brand new engineering laboratory, the implementation of 'crash programme' with the aids of the Ford Foundation grant has indeed accelerate developments in the College campus.

The tremendous process of growth and development in the College together with the four fold increase in students enrolment, CASU can expect much greater participation in the various field of activities. With respect to this, in the sports arena, a remarkable success was made in the organisation of the Games Carnival.

In the dramatic field, the play 'Rafi and Parwani' written and directed by non other than by Enche Ahmad Rashid, our Farm Director was staged and applaused. As usual much talent and potentials were discovered among the members of CASU.

The coming of agricultural experts all the way from the United States under the Ford Foundation grant has the objective of developing the College as well as training the Serdang diplomat to solve the intricate task of educating farmers in the rural area. Thus agricultural extension is an important role to be played by the Serdang diplomats. In this respect, members of CASU are indeed required to train themselves to become leaders and fully equipped in their agricultural knowledge to be able to do so. Organised meetings of village groups, village co-operatives and Farmers associations have to be planned and executed in order to implement the agricultural programme and activities with the objective of educating the farmers effectively. Without prior knowledge in meeting procedures and such like, the poor diplomat will be at loss and will fail in his tasks. CASU provides the training for this, and any members of CASU who fails to realize the importance of Union activities has indeed lost a golden opportunity.

In line with the agriculture diversification policy of the Government, there is a tremendous amount of employment opportunities for the students of Agriculture. The Sungei Muda Irrigation projects for instances, the opening of Jengka Triangle by the Federal Land Development Authority provide the challenge for the Agriculturally dedicated CASUans. Haven't the Serdang diplomats who have left the pertals of the College proved themselves to be indispensible in the Agricultural development of the country? During our short sojourn as CASUans in the Serdang campus we should make use of all the opportunity given to us.

CASU should always remain united towards the solving of problems and during our short stay, the spirit of tolerance and brotherhood should forever prevail, for who knows upon leaving the College we may meet again some place some where.

The coming academic year will see the population of the college increasing to 520. We shall get a new library which will boast the best collections of books on Agriculture in South East Asia, as well as a brand new College Hall.

The purchase of 550 acres of the Serdang Estate will indeed accelerate the College development towards producing better Serdang Diplomats.

The rapid expansion of our College is indeed our pride. We CASUans have our role to play, and let it be said that we play our role well. Who knows one day our College will become a Faculty of Agriculture?

Publications Secretary,
ABU BAKAR ADAM.

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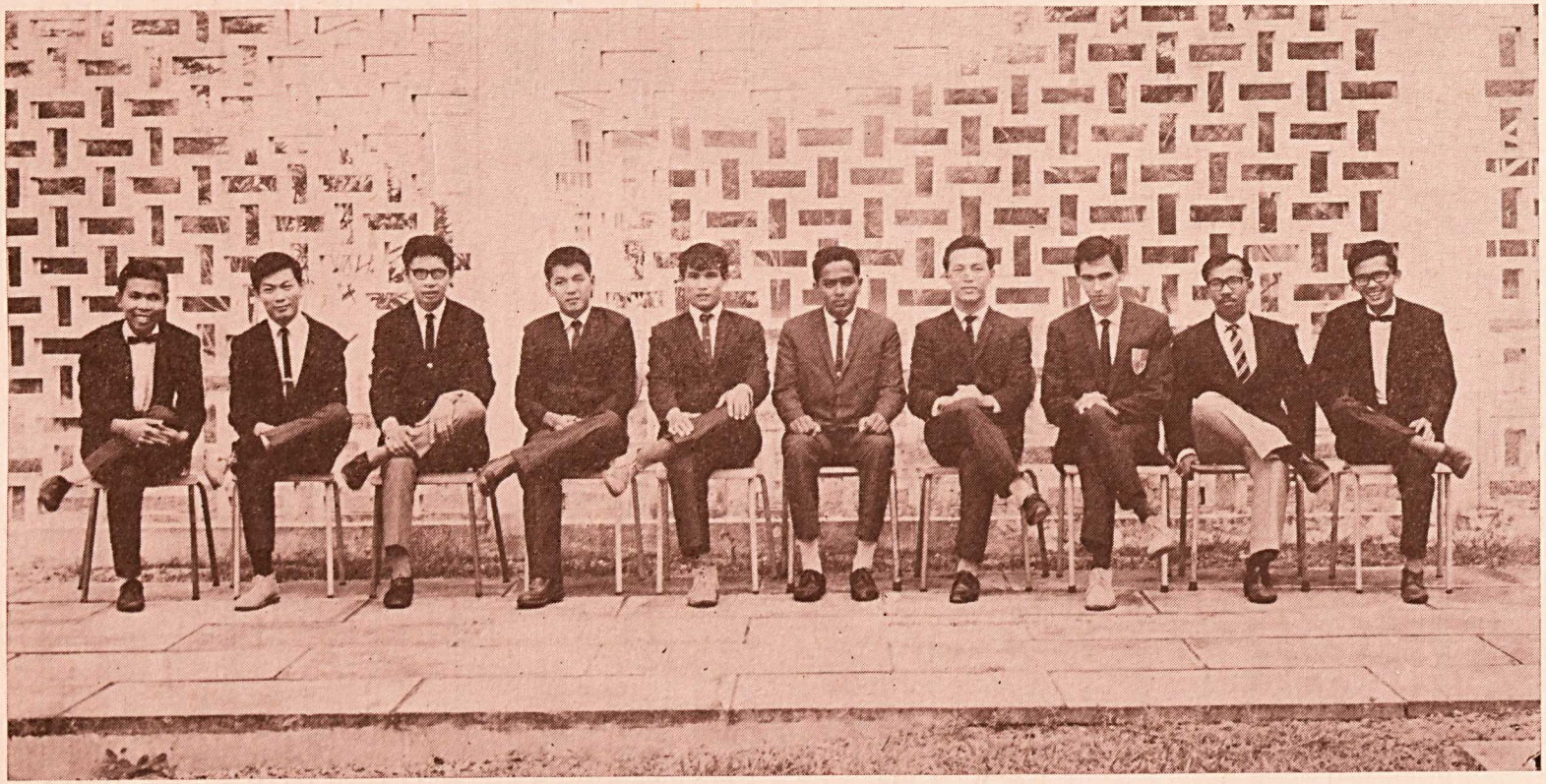
The 21st Student's Council



From L to R: Mohd. Sepuan Anu, Poh Syee Wha, Roslie Madanie, Pheh Thean Teik, Sulaiman Daud, S. Sivarajah, Chin Tan Leong, James Woodworth, Abu Bakar Adam, Ahmad Hassan.

REVOLUTION IN AGRICULTURAL EDUCATION IN MALAYSIA

Introduction:

ALMOST three-fourths of the working population of Malaysia are engaged either directly or indirectly in agricultural activities. This mirors the dorminant position of agriculture in our national economy. In fact it contributes only slightly less than half the gross national income. Thus it is of strategic importance to maintain a high maximum continued development of the agricultural sources in Malaysia for it generates not only increases in national income but also employment apportunities. Concrete materialistic progress in the agricultural sector is indicated by the devotion of a large amount of government resources directed to building an efficient road system, irrigation and drainage system, land development schemes, educational schemes and other similar facilities. Through those efforts, Malaysia now has the basic physical resources on which to build a sound agricultural economy that are superiors to other countries of South-east Asia and are better than most of the developing countries throughout the world.

Revolution:

One of the most common misconceptions about Revolution is the association of blood flowing down to dirty streets and drains, fire and dark cloak of smoke in the sky, panic-stickened women with wailing babies running aimlessly around; all those in a state of chaos and lawlessness. In fact, on the other side of the ledger, some of the most famous and greater revolutions in the history of mankind have been very gradual and peaceful ones. Basically, 'revolution' here means change — rapid change in the desired directions to meet the challenge of food production. It is more precisely a technological revolution.

Agriculture:

Let us consider the meaning of agriculture as it exist in Malaysia TODAY. As our industry agriculture is changing so rapidly that it is vastly different from what it was before the independence. Basically agriculture is the manipulation of biologic growth to obtain products useful to man.

Times change rapidly — alarmingly too rapidly. The whole wheel of agricultural activities have been revolutionized with the advancement of technological science.

What, then is the meaning ot agriculture today?

a) Agriculture means the application of science. For centuries and even until recently agriculture was primarily an art — today it is an applied science involving the application of chemistry, physics, genetics, economics, mathematics and other disciplines, in the production, marketing, processing and distributing of food and bibre or human consumption. The common concept that agriculture consists simply of farm production of plant and animals is much too narrow. In fact, off-farm aspects make up much of the industry.

b) Agriculture means business and industry. It perhaps is not readily realized that agriculture is Malaysia's biggest business. The total of the agricultural industry employs either directly or indirectly, about 60 to 70 per cent of the labour force. The vast majority are farmers, the remainder are engaged in either the marketing, processing, distribution and retailing of the products from the farms or the selling and manufacturing of machines, equipment and chemicals and other essentials required by the modern efficient farmers,

c) Agriculture means mass production and constant expansion. Long range predictions indicate quite conclusively that our agricultural industry will continue to expand at an ever increasing rate. Not only will the expansion be needed to care for the growing number of Malaysian but also for the hundreds of thousands of primitive people who dwell deep in the virgin jungles and today exists on totally inadequate nutritional levels.

d) Agriculture means employment opportunities: The expansion in the agricultural industry, both at home and abroad, will require an ever-increasing number of graduates in the years that lie ahead. These graduates, agrologists by profession, can fully expect to find increasing demand fo rthe abilities they have obtained through their academic training and practical knowledge.

Agricultural Educəation.

The term agricultural education is referred to by FAO as an abbreviation for education and training in food and agriculture. It is primarily concerned with preparing for direct employment into the agricultural sector. For the purpose of this essay, agricultural education is extended to embrace the newly introduced agricultural science in the schools. To meet the revolution of rising demands in a developing country like ours, the Government has taken great effective measures to revolutionize agricultural education. Through this comes the technical efficiency of translation of information of improved training techniques to the armers. The supply of this category of trained personnels is very limited. The scope has to be expanded both in terms of quantity and quality.

The College of Agriculture in Serdang is the nuclues of a steady outflow of trained personnels of a high calibre. It is indicated by the contributions of its many diplomates and the positions of importance and responsibility they now hold. Serdang diplomates have made outstanding records in Universities throughout the world and recent diplomates are continuing their trend. Therefore it is appropriate to take a look into its past records and present set-up.

History:

The present College of Agriculture originated as a school of Agriculture in 1927 under the Department of Agriculture. The school was then sited at Lake Gardens Kuala Lumpur in a humble attap roofed building. In 1930 the school was moved to its present site at Serdang. In 1947 the status of the school was raised to that of a College, running a two year Diploma Course. The two year Course was replaced the following year by the three year course which has been continued to this day.

Function:

The College of Agriculture was primarily intended as a ground for technical extension type appointments in the Government Agricultural Services. It has a much wider role to play nowadays and its past students are employed by all sectors of the agricultural industry, in Government, Quasi-Government and private enterprises. The table below gives an indication of the distribution of students who have left the College and found employment from 1963 to 1967.

Area	1963/67 *Total*		*Percentage*				
	No.	%	1963	1964	1965	1966	1967
All areas	480	100.0	100.0	100.0	100.0	100.0	100.0
Government	339	70.6	92.3	76.8	73.6	73.6	28.8
F.L.D.A.	20	4.2	0	4.2	0.9	2.1	18.2
Quasi-Govt	51	10.6	6.2	11.6	11.8	7.6	18.2
Private	65	13.5	1.5	7.4	12.8	15.3	31.8
Others	5	1.1	0	0	0.9	1.4	3.0

Administration:

On 1st January 1962, the control of the College of Agriculture was transferred to the Council of Agriculture Malaya which is the Authority of the University of Malaya. Funds to run the College are obtained mainly in the form of annual grants from the Ministry of Education. This is shown in the table below:-

Source of Income	1963 $	1964 $	1965 $	1966 $
Government Grants	381,468	476,293	557,425	717,213
All other sources	125,969	41.575	68,740	111,960
	*507,437	537,868	626,165	829,173

**Includes Hostel Accounts which were operated independently after 1963.*

Enrolment:

As from the 1966/67 Academic session, 160 students are admitted to the three year Diploma Course. By 1968 the Diploma Course will have a maximum of 480 students (less drop-outs). In addition, 40 students will be accepted annually to attend a Preliminary Course, this Course has been designed to elevate the academic standards of promising rural students to entrance requirements for the Diploma Course. The student population from 1968 will be a maximum of 520 until the Preliminary Course is discontinued.

Student enrolment since 1963 is shown below:-

Year	*Preliminary*	*1st Year*	*2nd Year*	*3rd Year*	*Total*
1963/64	—	21	31	23	75
1964/65	—	28	35	28	91
1965/66	—	38	39	36	113
1966/67	—	150	78	37	265
1967/68	40	160	161	76	437

(Girls form 10-15% of the Enrolment)

Subjects of Diploma Course:

1ST YEAR — Physics, Chemistry, Zoology, Mathematics, introduction to Agriculture, Basic Social Science, Fieldwork.

2ND YEAR — Plant Science, Soil Science, Animal Science, Agricultural Economics, Plant Protection, Crop Husbandry I, Basic Agricultural Education Fieldwork.

3RD YEAR — Crop Husbandry II, Animal Husbandry, Agricultural Engineering and Farm Machinary (optional), Home Economics (optional), Farm Management, Research Techniques, Project Report, Fieldwork.

Staffing:

The number of teaching staff has been increased to cope with the expansion in student population. There are at present twelve lecturers and nine assistant lecturers. In addition, there are five visiting Professors under the Ford Foundation Programme, one visiting Professor under the Fullbright Programme and four graduates under the British Overseas Scheme Working at the College.

Development:

A complete overhaul and reorientation of the outlook of the Colleg of Agriculture in Serdang is very necessary for the revolution to take place and be successful. This critical need has been recognized in the recent developmental programme under the First Malaysian Plan (1966-1970). The number of trained personnels needed for agricultural development in Malaysia would necessitate a marked expansion of annual intake of students. In 1966 the College Council launched a courageous massive crash development to increase the annual intake from 40 to 160 (five times the number entering the University of Malaya to read Agricultural Science). This four-fold increase of students is aimed to bring the total enrolment from a maximum of 120 in all the three year of the Diploma Course to 480 by June 1969. The $7.2 million development programme will be completed by the end of 1968 and will provide the following:

ALREADY COMPLETED — major items.

(i)	an engineering laboratory	$250,000
(ii)	Horticultural Unit	$ 35,000
(iii)	Poultry Unit (commercialized)	$ 36,000
(iv)	2 lecture theatres (capacity 400)	
(v)	New hostels	$1,338,000

TO BE COMPLETED:

(i)	A Science laboratory	$270,000
(ii)	College Hall	$500,000

Besides these, a new library with a seating capacity of 200 is to be constructed in the old hall to replace the small present library, sad to say, has only a seating capacity for about 20 students. New dining halls, kitchens and other necessary student union facilities shortly. A further 550 acres of land from the Serdang Estate had been added to the College Farm to approximate 850 acres.

Ford Foundation:

Last year the College received a $1.3 million grant from the Ford Foundation. Under this grant five old boys left only this year for specialized studies at the Louisiana State University. On their completion they would be obliged to serve in the College.

Foreign Experts:

Some of the foreign experts are now attached to the College under the grant. Prominent among them are:-

(i)	Prof. J. E. Johnston	(Ford Foundation)	Animal Science and Animal Husbandry
(ii)	Prof. L. L. Pesson	,,	Basic Agricultural Education
(iii)	Prof. J. L. Smilie	,,	Agricultural Engineering
(iv)	Prof. L. Standifer	,,	Plant Physiology
(v)	Prof. C. A. Miller	,,	Crop Husbandry
(vi)	Prof. T. T. Williams	(Fullbright)	Agricultural Economics

Profession In Agriculture:

Agriculture can be both a trade and a profession, but technically speaking we are more inclined toward the latter. Common to all professions is the desire to serve and so goes the motto of the College — "Bertani Untok Berbakti'. Agriculture, as a profession is dedicated to sewing man by enabling him to produce, process, market and distribute food and fibre more efficiently.

Freedom from Want:

Insofar as this pertains to man's needs for good and fibre we are far behind the advanced nations. Agriculture is very important so far as man needs food and fibre for survival. Professional agriculture is the bridge and link to the ultimate goal of universal "freedom from want".

College Diplomates — Services

Most of the services of the College Diplomates are geared to meet this ultimate goal. To achieve this, the first step is to uncover, through research and experimentation, ever more truths and natural relationship relative to food and fibre productions, with the applied disciplines of science. The second step is to encourage through teaching, the applications of the findings of research to the solution of agricultural problems. The broadness of scope in professional agriculture has made man to be specialized in each discipline.

Modern Agriculture — Malaysia.

For long Malaysia has been closely associated with rubber. The Rubber Research Institute of Malaya is the largest research institute in the world devoted and specialized in a sigler perennial crop. In various regions of Malaysia has been increased 4 to 5 times its previous yield through the introduction of new wonder's clone of rubber. Major battles have been fought and won in the constant war against weeds, insects, diseases and others. These are the immerse stride achieved by professional agriculturists and greater measures are strategically undertaken for continued improvement. These victories have saved millions of tons of food for man's use. With the introduction of padi Ria man has once again achieved a step closer toward self-sufficiency. The need for dedicated and disciplined agriculturists has never been greater than it is today. Only a revolution in agricultural education can really help to solve this chronic problem in the long-run. The challenge to keep food and fibre production in pace with continued population explosion rests squarely upon the profession of agriculture.

Agriculture — Various Professions.

The agricultural industry offers an attractive and wide range of careers and occupations with its broad scope. It is pertinent to state that no other profession offers such a wide range. Some of the common employment are as follow:

Education:

'Live and not survive; education comes first '. An overwhelming number of agricultural teachers are being required by schools, extension, services, business firms and governmental agencies. The demand far exceeds the supply at the present moment.

Research:

Research fieldwork men are needed for the welfare of the agricultural industry which looks to research to provide increased knowledge in such diverse fields as nutrition, disease control, economics, genetics, marketing, processing etc.

Business:

Commercial firms such as I.C.I. are employing agricultural graduates who have combined agricultural education with studies in economics and business administration or management. Other opprotunities in this line awaits diplomates in finance, transportation, storage, grading, sales of agricultural products.

Services:

Governmental agencies, federal and states take in diplomates to administer policy, protect farmers in their purchases of essential requirements and facilities.

Conservation:

The conservation of our soils, forests, shares and wild life offers increasing apportunity for diplomates. The development of many projects, Land Development Schemes, Land Rehabiliation Schemes, and the supervision and management of our natural resources is a field requiring highly trained personnel.

Conclusion:

With an immense channel of employment apportunities and with all the resources in the country, a Revolution in Agricultural Education must occur to equip the country with the necessary trained manpowrer to hold the country in the line of development. The only real long-time solution is to develop a programme which will in the shortest possible time, train Malaysians to teach Malaysians under Malaysian conditions.

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Foo Don Aoo
Second Year.

MALAYSIA AND THE WORLD FOOD PROBLEM

by

JAMES E. JOHNSTON
Senior Visiting Professor

THE College of Agriculture is now undergoing rapid expansion. The major reason for this is the Governments' recognition of the need for larger numbers of trained personnel to implement its policies of Agricultural Development and Crop Diversification. The obvious reason for these policies is the present dependence of the country on production of rubber which makes the economy of the country vulnerable to serious dislocation when International rubber prices fall as they have done recently. A second and, perhaps, equally important reason for these policies is the rapidly worsening world food situation. Malaysia has for many years been dependent on imported foodstuffs for a high percentage of its requirements. Present world trends indicated that there will be increasing competition for foodstuffs on the world markets. These trends could ultimately reach a crisis situation where Malaysia would no longer be able to afford to purchase its needs. The obvious solution is for Malaysia to becom more self-sufficient at least with regard to basic foodstuffs such as rice and other cereal grains. It seems appropriate for us to give serious consideration to this possibility now, before and not after a crisis develops.

The World Food Problem

The serious nature of the availability of food to meet the needs of a rapidly expanding world has surprisingly enough only received general recognition during the past six or seven years. Malthus, an early British Economist, had predicted that population would outstrip the ability of the World to produce food many years ago. However, advancing technology and the expansion of land areas under cultivation enabled the World to keep food production ahead of minimal population requirements. In fact the "Malthusian Doctrine" was frequently cited as an example of how erroneous predictions based on historical trends may sometimes be. During World War II with disruption of International Trade and internal problems in many countries starvation become a real spectre for many peoples. At the end of the war reconstruction proceeds rapidly, reserve food stocks were radistributed and the food situation began to look quite favourable. During the early and mid-1950's food production increased rapidly and per capita availability of food rose in many countries. The developed countries with their ability to rapidly apply advancing technology to Agriculture found themselves with agricultural surpluses. This was particularly true in the U.S.A. where, as a result of Government price support policies, huge stocks of wheat, maize, butter, etc. were built up. At that time the statistics did not seem to indicate a need for excessive worry.

The end of World War II was followed by many changes throughout the world. The Colonial system began to break up. The newly independent countries aspired to "catch up" with their former Colonial masters. While most were predominantly agricultural they saw "Industrialization" as the solution to the desire of their people for a rapid improvement in standards of living. Most "Development Plans" therefore focused on a rapid increase in the number of manufacturing plants with little or no consideration being given to agricultural improvement. The result of such programmes was a rapid rise in urban populations including many rural people attracted by the prospect of employment in the new industries. Meanwhile agriculture, with little real opportunity for improvement continued on traditional lines or where land reform was implemented, productivity actually declined due to the withdrawal of the capital resources and technical knowledge of the former landowner. The net result of most "Development Plans" was a net loss in standard of living rather than the anticipated improvement. Worse still the combined effects of rapidly rising populations and neglect of agricultural productivity resulted in a decrease in the per capita food production.

Many reasons can be advanced for the failure of Development Plans. Among them are Governmental inefficiency, resistance of people to change, sudden increases in population, etc. It seems reasonably clear now, however, tnat the overriding cause for failure of industrialization programmes was the failure of planners to realize that Industries can only prosper when a stable and expanding market exists within the country itself. When 70 to 80% of the people in a country are dependent on agriculture and this sector is not improved then industrialization is doomed to fail by lack of the necessary markets.

If the sole result of overemphasis on industrialization had been the failure of the established industries the problem would not be severe since such mistakes can be rectified. The disturbing feature of the trends which have been established during the past 20 years has been the increasing gap between population increase and increase of food production. One factor responsible for this has been the lack of emphasis on agriculture due to preoccupations with attempts to industrialize. The rate of population increase has risen until it approximates 3.0% per year. During the period from 1951-1961 food production increased at a rate of about 2.5% per year. During the period from 1963 to 1966 this dropped to 1.7% per year. Thus while there is no evidence of a decline in the rate of World Population increase there is real evidence of a decline in the ability of agriculture to produce enough food to meet the needs of the expanding population. The food deficits in the Developing Countries have been met in recent years by two areas of the World which have been capable of producing much more food than their own populations require. These are North America (U.S.A. and Canada) and Australasia (Australia and New Zealand). This provision of surplus food was aided materially by the fact that the U.S.A. built up tremendous surpluses of food, particularly grain, during the 1950's when worldwide deficits were not severe. These reserves have been depleted during the 1960's at a rapid rate. The U.S.A. wheat reserves disappeared in 1966 and relief shipments are now based on Annual production surpluses. The Canadian and Australian wheat surpluses are now being taken primarily by Russia and China so the maintenance of food supplies in other deficit areas has become primarily the responsibility of the U.S.A. which is now expanding its production of food grains as rapidly as possible to meet the needs of the Developing Countries.

Many projections of population and food production trends have been made. The most optimistic indicate that assuming that the surplus food production countries make every possible attempt to increase production, the average citizen of the World will be on the verge of starvation by 1985. Less optimistic projections place this cutoff date at 1975. It is obvious, however, that unless the Developing Countries themselves rapidly take steps to: (1) increase their own production of food; and (2) control their expanding populations; they can expect famine to strike at some time in the near future.

The Situation of Malaysia

Malaysia has, for many years, been a food importing country. It had depended on its foreign exchange earnings from export of rubber, tin, coconut and palm oil, etc. to enable it to purchase much of its food needs from other countries. The recent drop in International rubber prices has focused attention on overdependence on a single export crop. Perhaps more important, however, is the fact that, as a major food importer, it is dependent on the ability of other countries to produce and export, at a reasonable price, the products it needs. If these become scare because of increasing difficulties of the exporting countries to meet demands, prices will rise and Malaysia may well find difficulty in obtaining the food it requires.

TABLE I

NET ASIAN TRADE IN FOOD GRAINS (all Grains)

Period	*Net Grain Trade* (Thousands of Metric tons per year)	
1934-38	+ 2,187	*Exported*
1948-52	— 5,895	Imported
1957-59	— 10,130	,,
1959-61	— 17,000	,,
1964-65	— 24,000	,,
Estimated 1970	— 28,000	,,

Grains such as rice, wheat, maize and sorghum make up the principal energy source of the peoples of the world. The changes in world trade in these grains illustrate the situation in which Malaysia may find itself. Table 1 shows that the Asian Region as a whole has been losing ground rapidly in the effort to provide its basic food requirements. The major importers have been India, Pakistan and Mainland China but even those countries which were large net exporters have suddenly encountered difficulties. At one time Burma, was the largest exporter of rice in the World. During recent years it has had increasing difficulty in meeting its export commitments and on the basis of current trends may soon be unable to meet its own internal requirements. Thailand has also been a major rice exporter and the principal supplier to Malaysia. It is also having difficulty in meeting export committments and during each of the last two years nas had to announce restrictions on exports. As a result in 1967 the U.S.A. became the world's largest exporter of rice.

While some countries in the Region show evidence that their position has improved recently these are in the minority and the change is unlikely to have much impact on the overall deficit. Among the brighter spots are the fact that West Pakistan is approaching self-sufficiency in wheat and the Philippines in rice. There is a real quest whether these changes are permanent or merely reflections of a sudden upsurge due to introductions of new varieties. These increases in productivity can be maintained only through continuing improvement programmes including even better varieties, increased use of fertilizers, insecticides, etc. No country in the region with the possible exceptions of Taiwan and Japan has thus far demonstrated the ability to maintain such a continuing programme.

TABLE II

VALUE OF MALAYSIAN FOOD IMPORTS: STATES OF MALAYA
(Millions of Dollars)

Commodity	1950	1960	1963	1964	1965
Rice	129	135	165	157	113
Other Cereals	40	61	92	93	104
Dairy Products	45	98	88	91	93
Fruits and Vegetables	51	63	73	80	78
Sugar	64	62	86	113	63
Other Food	75	139	153	161	163
Total	404	558	657	695	614

From Malaysia — Official Yearbook 1965

The cost of food imports to Malaysia during the period since 1950 are shown in table II. It is apparent that there has been an upward trend in all commodities with the possible exception or rice. The Government has now adopted a policy of agricul-

tural diversification which include plans for increased production of major food crops. Malaysia undoubtedly has the resources to not only meet its major food needs but even to become an exporter of some food products. The world trends in food availability make it obvious that this is a valid programme and one that may even be critical to National Survival.

Many factors are involved in making Agricultural Diversification work. Large scale capital investments such as the Muda and Kemubu irrigation schemes, the Jenka Triangle — F.L.D.A. scheme and others have already been authorized. The development of more effective agricultural research and extension, agricultural credit and marketing programmes will be required if success is to be achieved. The one key to all such programmes is the availability of *effective* and well trained agricultural man-power. Improvement in agriculture requires *change* and this can only be brought about by people. Men and women who not only have the necessary knowledge but also the willingness to do a job that may well require sacrifice on their part. It is the role of the College of Agriculture to produce such trained and dedicated people. The college, however, can only provide opportunity to learn — the student who is called upon to apply his knowledge after graduation will determine the success or failure of the programme.

Conclusion

Malaysia together with the rest of the World faces a challenge during the next few years. The challenge is not only to provide the better things in life that all peoples want but to provide enough of the most elementary requirements for life. Nothing is more elementary than food yet the World trends in population growth and food production indicate that during the next ten to twenty years there will not be enough food to prevent starvation. Malaysia, as a food importing country located in the region where the greatest scarcity is likely to occur is in a particularly vulnerable position. The country would appear to have little choice but to move as quickly as possible to guarantee that its own people will have enough to eat. Beyond this it might well be able to assist its neighbors by producing enough of certain commodities to export surpluses. Malaysia unlike many of its overpopulated neighbors has the possibility of moving quickly to solve its problems. Whether it is able to do so will depend largely on the effectiveness of its trained Agricultural Personnel.

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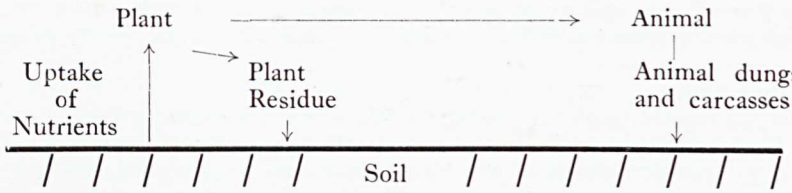
RELATIONSHIP OF ORGANIC MATTER WITH SOIL PRODUCTIVITY

WHEN people talks about productivity of soil, many will think of the nutrient statue of the soil. In actual act, soil productivity does not only refer to nutrient status but more important, the physical properties of the soil, e.g. structure aeration, water holding capacity etc, and also the biological properties of the soil e.g. the micro organism activities in on the soil.

Nature maintains Productivity of the Soil

On a piece of virgin jungle, trees have been growing for thousands of years, but the soil of the virgin land is still fertile and productive especially in the Tropical forest. This is because there is a natural cycle between Plants and Animals with the soil on which they are living, as shown below



Soil nutrient is being taken away directly by plants and indirectly by animals, at the same time, the soil productivity is being maintained by a continuous supply of dead plant tissue and animal dungs and carcasses which are all called Organic Matter. These organic matter can improve the physical, chemical and biological properties of the soil.

However, in a piece of cultivated land, crops are planted on the land, and the farmer harvests the crops and removes them from the land, so the nutrients are being removed from the soil. Also continuous cultivation will destroy some of the soil structure, so the soil need the same type of soil amendment as what nature supply to the virgin soil — Organic Matter.

Organic Matter in Relation to soil Structure

Soil structure is one of the most important factors for soil fertility. A soil of good structure will have the following properties:

1) Well aerated and well drained.
2) Can prevent leaching away of nutrient and erosion.
3) Can hold sufficient moisture for plant growth.
4) Good anchorage for plants.
5) Good penetration of roots.

Organic matter, together with clay are the materials responsible for the formation of soil structure. It is Organic Matter that bind the sand, silt and clay together to form an aggregate which is called structure, otherwise the soil will be structureless and useless for cultivation of crops.

Effect of Organic Matter on Different Textural Soils

1. SANDAY SOIL

This type of soil is usually very low in Organic Matter as well as clay. Example is the Rudua series of the Bris from East Coast which is an almost structureless loose coarse sand usually overdrained, so no crops can be cultivated. By addition of sufficient

amount of Organic Matter to this type of sandy soil, we can increase the aggregation of the sand particles, thus increasing the water holding capacity of the soil, and crops can be planted.

2. Clay Soils

The working quality of clayed soil are greatly improved by additions of Organic Matters especially under wet conditions. Suitable amount of well decomposed Organic Matter will decrease the puddling of clay soil when worked under wet condition.

3. Fine Sand and Silt

Although silty soil have structure, but the structure formed by silt is not water stable, so in wet weather, the structure collapses; thus the aeration and drainage of the soil deteriorates and this restricts the uptake of nutrients by roots in the soil. Organic matter should be added to form a stable aggregates.

Stability of Soil Structure

Although Organic Matter and clay colloids are the two elements responsible for the formation structure, without Organic Matter, the structure formed by clay only will not be stable. The Organic Matter colloids will form a plastic layer on the structure unit so that it is water stable. It is the stability of the soil aggregates which is most vital in the structural behaviour of soil. When stable aggregates are less, soil tends to puddle. Further, soil structures are constantly destroyed by disintegrating forces of water and physical action, so the addition of Organic Matter is necessary to maintain a good structure of soil.

Organic Matter as a Reservoir of Nutrient

Most of the soil nitrogen occurs in organic forms, only a small fraction, 1-3 percent occurs in inorganic form. Also a considerable quantity of organic Phosphorus and Sulphur are also found in Organic Matter. Other essential elements Potassium Calcium and Magnesium as well as many Trace Elements are present in the Organic Matter. Upon decomposition, Organic Matter supplies the nutrients needed by growing plants as well as many hormones and antibiotics. These are released in harmony with the needs of plants. When environmental conditions are favourable for rapid growth, this will also favour the release of nutrients from the Organic Matter.

Nutrient uptake and mobility

When fertilizer is applied to the soil, the plant may not need it at that time, it may need it later, so, the fertilizer is liable to be leached under Tropical condition. Fortunately, the soil contains colloids which are capable of ionic exchange so the fertilizer can be absorbed by the colloids and released when the plants need it. These colloids are clay colloids and organic matter colloids. However, in the Tropic cation exchange capacity of our clay, kaolinite is very low, only 3-15 m.e. The C.E.C. of Organic Matter (Humus) is as high as 150-300 m.e. Therefore it is very necessary for farmer in the Tropics to apply Organic Matter to their soil, especially sandy soil, in order to increase the fertilizer absorptive capacity of the soil and to prevent leaching of nutrients.

In the process of decomposition of Organic Matter, Organic acids are produced. These acids though weak are able to dissolve certain minerals and release the nutrient in an available form to plant. So the addition of Organic Matter more or less mobilize the nutrient reserve of the soil. The presence of Organic Matter colloids, like clay colloids, also have a buffering effect on the soil, this prevents the fluctuation of the soil reaction due to addition of fertilizer.

Micro-biological Effect

Micro-organism activities in the soil improve the structure of the soil, some of them help to convert ammonia into nitrate which is available to plant, while others can fixed nitrogen from the air. The organic matter serve as a food for the growth of these micro-organisms. Without carbon which is plentiful in Organic Matter, nitrogen fixation by nitrogen fixing bacteria is impossible.

Organic matter also provide for many soil life such as earthworms which are responsible for improvement of soil. These Organisms burrow in the soil and serve not only to loosen the soil but also to increase drainage and aeration of the soil.

Different Sources of Organic Matter and their Difference in Effect to Soil Productivity

Farm-yard manure is a very important source of Organic Matter, in fact it was the only source of Organic Matter applied by farmers in the old days. These are the dungs of cattles, pigs, sheeps, horses etc. Another source of Organic Matter will be a crop rotation containing a crop of green manure. This green manure can be a legume which can supply nitrogen to the soil, or can be different grasses with application of nitrogen fertilizer. Both farm yard manure and green manure improves structure of soil but permeability is increased more under grass and its improvement persists at least two years, which with farm yard manure it only persists at 18 months. Where structure improvement is concerned a period under green manure is more effective than the occasional dressing of Farm yard manure.

Russel found from experiment that the depletion of Organic matter was considerably reduced by a 3 year rotation of maize-oat-clover, only 15 percent of loss as compared to 40-66% of loss without a green manure. Further, the roots of grasses and legume can bind the soil particles in sandy soil, and can break the clods in clayey soil which the Farm yard manure cannot do.

Conclusion

In most literature on soil, the authors all agreed that Organic Matter in any form is one of the essential elements of soil productivity. For many hundreds, perhaps thousands of years man has been cultivating the land, so destroying the soil structure and removing the soil nutrients, thus he has to apply some form of amendment in order to improve the structure as well as nutrient status. Without the application of organic matter, he cannot regain the productivity of the soil. By suitable management and cultivation eg. crop rotation including green manure crops, mixed farming with animal husbandry, man can apply organic matter to his land cheaply, because this is only a by-product of his profitable enterprise.

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Poh Kok Kian
Tahun Dua.

THE SUNGAI MERAB STATE LAND DEVELOPMENT SCHEME

by

T. T. WILLIAMS[1] AND MOHAMMAD RASHID BIN AHMAD[2]

INTRODUCTION

KAMPONG Sungai Merab is a State Land Development Scheme located in the Ulu Langat District, Selangor State, Malaysia. The Scheme is within a twenty-mile radius of the three major educational institutions responsible for the training of professional and semi-professional agriculturists.

From 1963 to 1967 four hundred and eighty trained agriculturists graduated from the three educational institutions, Table 1.

Table 1.

PERCENTAGE DISTRIBUTION OF AGRICULTURE GRADUATES FROM THE THREE MAJOR INSTITUTIONS BY YEAR, WEST MALAYSIA, 1963 TO 1967

Institution	Total		Year				
	Number	Per cent	1963	1964	1965	1966	1967
All Graduates	480	100.0	100.0	100.0	100.0	100.0	100.0
Faculty	195	19.8	10.8	15.8	19.1	16.0	43.9
College	23	25.6	—	24.2	24.5	25.0	56.1
School	262	54.6	89.2	60.0	56.4	59.0	—
All Graduates	480	100.0	13.5	19.8	22.9	30.0	13.8
Faculty	95	100.0	7.4	15.8	22.1	24.2	30.5
College	123	100.0	—	18.7	22.0	29.3	30.1
School	262	100.0	22.1	21.8	23.7	32.4	—

Source: Graduation records of the respective institutions.

It has been estimated that by 1970 over 800 trained agriculturists will be needed annually to implement the rural programs envisoned under the First Five-year Malaysia Plan. While the increasing demand for trained agriculturists is a reflection of the changing needs of rural people, added strain has been placed on the human and physical resources of educational institutions as they attempt to provide the employment market with the required quantity and quality of agriculturists.

1) Visiting Fulbright Professor, Agricultural Economics, College of Agriculture, Malaya. (Professor and Head, Department of Agricultural Economics and Director of Research and Development, Southern University, Baton Rougr, Louisiana, U.S.A.)

2) Farm Director, College of Agriculture, Malaya.

Table 2.

PERCENTAGE DISTRIBUTION OF THE EMPLOYMENT PATTERN (FIRST JOB ACCEPTED) OF AGRICULTURE GRADUATES BY AREA AND YEAR, MALAYSIA. 1963 to 1967.

Area	Total		Year				
	Number	Per Cent	1963	1964	1965	1966	1967
All Graduates	480	100.0	100.0	100.0	100.0	100.0	100.0
Government	339	70.6	92.3	76.8	73.6	73.6	28.8
FLDA	20	4.2	0	4.2	.9	2.1	18.2
Semi-Private	51	10.6	6.2	11.6	11.8	7.6	18.2
Private	65	13.5	1.5	7.4	12.8	15.3	31.8
Others	5	1.1	0	0	.9	1.4	3.0
All Graduates	480	100.0	13.5	19.8	22.9	30.0	13.8
Government	339	100.0	17.7	21.5	23.9	31.3	5.6
FLDA	20	100.0	0	20.0	5.0	15.0	60.0
Semi-Private	51	100.0	7.8	21.6	25.5	21.6	23.5
Private	65	100.0	1.6	10.8	21.5	33.8	32.3
Others	5	100.0	—	—	20.0	40.0	40.0

Source; Graduation and Employment records of the respective Institutions.

Historically, agriculture graduates have pursued careers with government, semi-private and private firms, Table 2. Of the 480 agriculturists entering the labour market from 1963 to 1967, seventy-one per cent accepted employment with government and 24 per cent with semi-private and private firms. Beginning in 1965 the employment pattern of trained agriculturists underwent a significant change. During the three-year period (1965-67) trained agriculturists accepting their first job with Federal Land Development Authority (FLDA) increased over 17 per cent.

This study is one in a series of investigations designed to provide policy-makers and educators with a keener insight into the changing characteristics of rural people and rural institutions. Findings from these studies will provide policy makers and educators with a keener insight into the type of training required of the "raw-product" (Freshmen) to produce the "Finished Product" (Agriculturists) who are both sensitive to the changing needs of rural people and capable of implementing rural development policies.

Since the inauguration of the Merab Scheme in 1960, the College staff and students have made periodic visits to the area to become familiar with the program. The basic idea for this study grew out of earlier visits to the Scheme by the College staff and students. Inspite of the familiarity of the College personnel with the Scheme, limited recorded data were available regarding the operation of the Scheme, family characteristics and the needs of the settlers.

The broad objective of this study was to ascertain some factual data relative to the Scheme for use in guiding the agricultural instruction, and extension programs in West Malaysia. More specifically, the objectives of this study were: (1) to determine the characteristics of the Merab settlers and (2) to gain some insight into the operation of the Scheme as a program for assisting the landless to become a viable group in West Malaysia.

Collection of Data

Data for this study were secured by interviewing 112 of the 164 Merab settlers. The interviews were started and completed during the month of December, 1966.

Prior to the interviews, enumerators were instructed on such topics as Scheme layout, sampling procedure and the interpretation of questions to be asked each male head of the household. Returned schedules were edited and inconsistent information omitted from the study.

SUMMARY, FINDINGS, OBSERVATIONS[3] AND RECOMMENDATIONS

Summary

Sungai Merab is a State Land Development Scheme located in the Ulu Langat District of Selangor State, Malaysia. The 1,320 acres of land encompassing the scheme were developed in two phases. Phase I land (680 acres) with provisions for 85 settlers was cleared in 1960 and home construction started and completed in the same year. Settlers were permitted to begin occupying the Phase I units in 1962. Phase II land (640 acres) with provisions for 80 settlers was cleared in 1962, home construction completed in 1965 and settlers moved into the units the same year.

The selection of settlers and the assignment of land were the responsibilities of a committee consisting of the District and Settlement Officers, Assemblyman and Peng hulu. The four major criteria for selecting settlers to locate on the scheme were: (1) resident of the Beranang, Kajang or Semenyeh Mukims, (2) married with a relative large family; (3) under 50 years of age and (4) landless. The number of settlers the Scheme could accommodate was determined by the acres alloted each settler. Size of farm unit was eight acres—two acres for the farmstead and six acres for rubber trees. Both the rubber tree and farmstead areas were assigned to settlers on a draw-lot basis in which chance determined the location. The farthest distance between the farmstead and the rubber tree area was about two miles and the nearest distance was less than one-tenth of a mile.

Prior to permitting settlers to locate on the Scheme, the land was cleared and rubber trees planted and budgrafted. Although the two acre farmstead was assigned each settler immediately upon selection to participate on the Scheme, the six acres of rubber tree land were alloted to the settler at a later period. Each settler in Phase I was provided with a house valued at $1,160 and in Phase II with a house for $1,200. The difference in house cost was attributed to the construction arrangement rather than material, house size or workmanship.

Costs of supplies, fertilizer, fruit trees and house were charged to the account of each settler with payment to commence when production started on the major enterprise (rubber latex). Fertilizer was delivered to the contractor and charged to the settler. Only Phase I settlers were provided with fruit plants and subsistence allowance. The years Phase I settlers were provided with subsistence allowance were the years they were required to maintain the rubber tree area. Phase I and Phase II settlers were permitted to seek employment with the maintenance contractor. The maintenance contractor was responsible for planting the rubber trees and maintaining the area for six years after which each settler was to assume the responsibility of the six-acre rubber tree land.

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3) Prior to and after the analysis of data got underway the authors met and talked with a number of settlers and land development officials throughout West Malaysia. In addition, periodic visits were made to the Merab Scheme. During these visits we discussed the weak and strong points of land development programs. The observations and recommendations for other Schemes are reflections of information and insight gained by the authors during the series of Scheme visits.

Three settlers in Phase I established a like number of Scheme stores with capital borrowed from MARA. The three stores were located in Phase I and provided a number of settlers with a nereby market for food and sundry items. Of the three major sources of family income — crop, animal, and off-farm-income from off-farm employment was the largest for both groups of settlers.

Phase I settlers had resided on the Scheme for over two years and Phase II settlers for under two years. Few visitations were made by agricultural-oriented offlcials to the farm unit of each settler. Less than 30 per cent of the settlers reported a visit by an agricultural official during the previous year even though a rubber technician (Scheme Resident Supervisor) resided on the Scheme. The Resident Supervisor assisted by the Scheme Committee Chairman was responsible for the day to day operation of the Scheme.

The typical husband and wife of Phase I settlers were older than their counterpart among Phase II settlers. Eighty per cent of the husbands and 29 per cent of the wives of Phase I settlers were 37 to 48 years of age as compared with 42 per cent and 16 per cent respectively of Phase II husbands and wives. Twenty five per cent of the husbands were under 37 years of age as compared with 62 per cent of the wives. Approximately 18 per cent of the child population (5.7 per family) were under three years of age; 51 per cent male and 49 per cent female.

Water supply, human waste disposal and power farm machinery were facilities most needed by Merab settlers. Over 36 per cent of the settlers listed road improvement as a facility needed to increase farm income and 77 per cent listed water supply as necessary to improve their living conditions. Football and sepak raga were the two most popular sports for husbands while mat-making was reported as the major handicraft by the largest number of wives in both phases of the Scheme.

Findings

The rapidity with which land development Schemes can effectuate the objective of making the previously landless people a viable economic group in Malaysia will depend upon two primary factors: (1) the degree to which settlers are infused with their role and responsibility in promoting economic growth and (2) the intensiveness of the program used to diffuse information regarding the development of the land area into an economic unit. The former relates to activities designed to involve settlers at an early stage in the Scheme development, while the latter is concerned with the proper coordination of all programs to sustain an active participation of settlers in economic development.

Desire for the ownership of a home and land were apparently a strong motivating factor in getting the landless to move into the Scheme, but the experiences during the years residing there had limited impact upon sustaining and strengthening such hope. Enumerated below are nine study findings and six observations.

1. The allocation of land to settlers at the time they were selected to participate on the Scheme, but after the area had been cleared and planted to rubber trees prevented settlers from sharing in the initial development of the Scheme.

2. Requiring the contractor rather than settlers to accept delivery of supplies and assume the responsibility for their use deprived settlers of practical farm management training and experience.

3. The chance method of allocating the farmstead area did not take into consideration land capability and resulted in the misuse of land.

4. Inadequate water supply and human disposal facilities created a potential health hazard among Merab settlers.

5. The disproportionate number of amenities located in Phase I as compared with Phase II and the pathless road conditions in both phases made transportation communication within and ourside the Scheme difficult.

6. The long time delay in the completion of land clearing, home construction and occupying the settlement units prolonged the time settlers could direct their attention toward the development of an economic farm unit.

7. Limited contact with the settlers by the Scheme Supervisor deprived settlers of an opportunity to learn and practice leadership and assume responsibility while developing the farm units.

8. The off-farm employment pattern served to de-emphasize the importance of producing food for home consumption.

9. Limited consideration was given to the utilisation of the two acres of farm-stead land as a source of farm income.

Observations

During the extended period the authors spent within the Merab Scheme talking with settlers and Scheme officials, the following observations were made:

1. There was a lack of dialogue between the Merab Scheme Supervisor and supervisors from other nearby schemes concerning common problems and procedures.

2. A small number of Merab settlers kept farm records and accounts.

3. There were infrequent formal or informal contacts between the Merab settlers and the Scheme Supervisor.

4. A viable organization through which needs could be expressed and leadership qualities developed was not evident on the Scheme.

5. There was a lack of coordination between Scheme officials at agricultural-oriented educational institutions.

6. Income from the sale of rubber latex is a number of years away for both phases of the Scheme.

RECOMMENDATIONS.

A. **Merab Scheme:**

1. Complete the road arteries and water system.

2. Assign a general agriculturist to the Scheme. The responsibilities of the agriculturist should be to:

   a) Coordinate the Scheme activities and programs.

   b) Assist settlers with planning the best use of the farmstead land. Priority should be given to the use of the land for the production of intensive enterprises.

   c) Encourage settlers to purchase inputs (fertilizer, seeds et cetera) and market their outputs (produce) on a cooperative basis.

   d) Assist settlers with securing a guarantee price and market for their produce

e) Develop and implement a training program designed to provide settlers with production and marketing information on the intensive enterprises produced on the farmstead land. The radio should be used to disseminate information.

f) Encourage and assist the housewives to develop handicraft into a business.

g) Assist settlers with the construction of outdoor toilets.

3. Require each settler to maintain the rubber tree area. The rubber specialists should make visits to the Scheme for the purpose of conducting demonstrations and advising settlers on the culture of rubber trees.

B. **Other Schemes:**

Land schemes should be developed in two distinct stages as follows:

1. **Stage I (Orientation)**

a) The method of selecting families to participate in the scheme should give more consideration to the attitude of participants toward economic development.

b) Settlers selected for Stage I should be provided with intensive training on topics designed to prepare them for land and home ownership responsibilities.

c) Participants should be employed to clear the land, construct houses and assist with the erection of other amenities to be located on the scheme.

d) The resources of educational institutions (agricultural) should be utilized in the planning of orientation programs.

2. **Stage II (Diffusion of Information)**

a) Only those families participating in Stage I should be permitted to apply for Stage II. The family head should have demonstrated an understanding of the scheme objective during the period employed in Stage I.

b) The information compiled on each settler (preferences for enterprises, work habits and family characteristics) during the orientation period should be used to objectively appraise the formal application for Stage II. Similar information should be used by the scheme officials to design and plan the training program.

c) The farmstead and major enterprises area should be allocated as a package unit. Such factors as land capability and intended use should weigh heavily in the land allocation procedure.

d) Once the land has been allocated settlers should be required to plan and maintain the land area. A monthly subsistence allowance based on work performed should be provided each settler for a specified period.

e) The resources of educational institutions should be utilized in the development of vocational training programs for the scheme youth.

f) The total land area allocated to each settler should be developed as an economic unit.

g) There should be close supervision of the scheme by an agriculturist rather than a specialist. The agriculturist should be an individual who understands the settlers and has a close working relationship with the various agricultural-oriented service agents.

C. **Institutions of Higher Education (Schools, Colleges and Faculty of Agriculture)**

1. Implement a "scheme plan" for practical laboratory experience. With the increasing student enrollment in agriculture the available resources to effectively involve students in practical farm work will be strained at most institutions. A "scheme plan" will provide the students and teaching personnel with an opportunity to become more directly involved in rural work assimilating life-like conditions.

2. Attune the curriculum to the needs of the people. The curriculum should be oriented toward the application of knowledge to the amelioration of rural problems. The curriculum should be so structured that the personnel and facilities of the institutions can be more directly involved in rural development schemes.

3. Avoid the duplication of efforts by the various institutions. The off-campus activities ("scheme plan") should be inaugurated during the long vacation period (February through May). The authors strongly recommend that a committee consisting of persons from the various institutions work out the detail for the implementation of the "scheme plan" concept.

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INEQUALITY IN DAY TO DAY EARNINGS

LOOKING at the people of Malaysia from the point of their earning is like seeing a world of differences. The gap between the earnings of a rural dweller and a town dweller is still too wide to be appreciated. Great differences also occur in the earnings of different races found here. This is a national problem and one that calls for every ounce of available efforts towards its solution. Let us therefore try to examine and muse over a few factors which explain this silent disaster.

ONE: The geographical difference does count a lot in bringing about the inequality. This results in a difference in the cost of living. The cost of living in urban areas is higner than that in the rural areas and it is an accepted thing that urban workers obtain more than a rural worker even though they held similar posts. Of course, this difference is not necessarily followed by the difference in real income.

TWO: is the difference in total production. A rubber tapper who obtain five rubber sheets per day naturally makes more than one who produces only two.

THREE: This is the difference in individual capabilities. We find in a particular society a small percentage of people who, by their own talents and abilities are able to offer service or production welcomed by the society as a whole. These people are of course highly paid. Artists, singers, famous actors are examples of those who belong to this small percentage.

FOUR: The amount of inherited properties also determine an equility of income. The only son of a farmer who receives on appreciable amount of property from his father is naturally more well of than his neighbour who inherited only small plot of land from his father. On the other hand the income of the rich farmer's son is a mere nothing when compared to those of the sons of estate owners, rubber dealers and millionaires.

FIVE: The difference in the standard and quality of the education given. Some individuals are already equipped with intelligence but blunders because of the weak training and education received. They therefore cannot achieve very much and thus cannot compete with those with a much better educational background . Their earnings are therefore lower. Even amongst the highly educated there occur wage inequalities due to the different levels of efficiency shown.

SIX: This is the family status and all that is concerned with it. Members of distinguished families have easy access to highly paid positions. Even near acquintances and the like benefit in the same manner.

Tuan Syed Hussein bin Ali — Lecturer of Sociology in the University of Malaya has rightly stated that wealth seems to belong only to the wealthy.

SEVEN: Another important factor is that opportunities available for higher achievements are never tne same between an individual and another.

EIGHT: Some workers do not possess the grasp of tactics which gives them the ability to bargain for their salaries and the result is of course low pay.

NINE: The ninth factor is experience. A young dynamic personality, ready to offer his service and knowledge obtained from University of Malaya for example, may find that with regards experience he is nowhere, nowhere at all.

TEN: This involves the fluency of speech of the persons in the main language of the various working group. Some commercial firms, for example, fixes fluency in the Chinese language as one of the qualifications for entrance. Thus more posts in this firm are held by the Chinese than any ohter races.

Other factors mostly have their source in areas especially in the older and remote villages with many inhabitants. Here villagers work for a much lesser time than they should, and the rest of the time is spent at leisure. The concentration of labourers 'is limited to the urban areas where there are more marketing facilities. Village economy is the economy of sufficient to eat' — every family trying their best to fill their own needs only.

Result of the Inequality:- DISADVANTAGES

1. The formation of the system of classes i.e. Millionaires, Middle Class, the rich, the poor etc. This leads to dissatisfaction amongst the lower classes and grudges are formed against the upper class for their better opportunities in both politics and education.

2. Usually the lower classes are not rightly represented in the parliament. The representatives normally member of the upper classes who may not have the true understanding of the existing situation of the other group.

3. Another resultant factor is the rise of the monopoly system in business and commerce. The rich grows richer and the poor yet still poorer. Those who have the natural capabilities of accomplishment have their talent smashed to pieces. Finally grievances may spark into a flame of rebellion against the rich and crimes are commited.

ADVANTAGES

The everflowing income of the rich can be turned to savings. Principle investments are done in the private sector and this is greatly beneficial by providing labour and other benefits towards the whole society. Investment can be successful only with huge savings of the rich.

CLOSING THE GAP

Some countries are trying to close or at least narrow, the inequility gap by having a very minimum wage law. In such countries these having less than the minimum will be aided by the government.

Social Welfare plans such as aids in education, aids to mother after birth of child, aids to victim of accidents, medical facilities etc are directed especially to the poor. Other social facilities e.g. village halls, libraries, radio and television are also provided.

Scholarship distribution, too, should be done on a fairer basis. Various methods of awarding should include giving scholarships to students of poor family background but they need not necessarily have a high academic qualification. They belong to the Vicious Circle area. This opinion has been voiced by one of Chief Education Officer in Malaysia.

The financial needs of the government in dealing with such matters an be fulfilled by way of progressive taxation. But a cautious approaches is essential in this because too 'progressive a taxation will mean lighter savings in the country. This also mean less prospects of investments. Savings and investments are very important to developing countries like Malaysia.

Government leaders and leading economists realise this and therefore the highest income tax of 40% only , ends at the end of 1965. We do not want to kill the goose which lays the golden eggs.

A Translation by:
NORAZIAH MOHD. NADZRI
Tahun Satu.

METHODS OF ARTIFICIALLY DRYING PADI

by

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Introduction

A grain drying system can help control the two variables that have plagued farmers since the beginning of time — the weather and the market. Before the advent of modern grain drying techniques, the farmer was largely dependent on the weather to field dry his crop to the point where it could be harvested and safely stored. Natural field drying involves high weather risks and the danger of heavy losses in the field. Today, it's possible with a grain drying system to beat the weather by harvesting at maturity. By harvesting early the farmer can obtain a greater yield of higher quality padi.

The development of crop drying centers in Malaysia using heated air for moisture removal can mechanize a task that has been until today left to nature. Drying has always been a gamble that the sun would win out over rain and storm.

Excess moisture in padi is the biggest problem encountered in storing it safely. Grain can be harvested satisfactorily with a mechine or by hand as soon as it is ripe, but it contains too much moisture for safe storage. The practice of delaying harvest to allow grain to completely field dry is not dependable because of the weather. This practice also results in field losses.

A practical method of drying gives the farmer two principal advantages. First, it permits harvesting the grain as soon as it is ripe and mature and thus avoiding field losses. Secondly, it places the padi in a condition for safe storage until milled.

How Padi Dries

In a grain drying system, air is used as a medium for removing moisture from the grain as it is evaporated. Evaporation of the moisture from the grain requires energy in the form of heat. This heat is normally supplied by the hot air forced through the grain. The amount of moisture which air can pick up and transport as it moves through a column of grain is dependent upon its temperature, relative humidity, velocity, distance travelled and the condition of the grain through which it passes. Put simply, hot, dry air is blown into the padi and the air comes out coller and water; thus the padi looses moisture to the air.

An individual kernel of padi dries from the outside inward. If the kernal is dried too fast or at too high temperature it will "stress check"—often called sun check. This can happen in artificial as well as sun drying. Research indicates that if padi is harvested in hot, dry, sunny weather it should be done when moisture content is 20 to 24% to prevent excessive sun checking. On the other hand, if padi is harvested under cloudy conditions with a rather high humidity harvesting can be delayed until the moisture has reached about 14% without excessive checking. In mechanical drying the conditions are controlled to reduce checking and maintain high milling yield.

Methods of Drying

There are three basic methods of drying padi. They are the batch process, continous flow, and intermittent continuous flow or multipass. The batch and continous flow may use either natural air, air with supplemental heat, or heated air.

In the batch type drier the padi is usually dried in a bin in which it will be stored; however, it can be removed and sacked. When using natural air with the batch process, it may take from one to three weeks to dry the batch. This method is used only in areas

of low humidity. When supplemental heat is used for this method, the air is raised about 10 to15 degrees F. or just enough to lower the humidity so that drying can take place. Several hours are usually required in drying and depending on the size of the batch, drying time can extend over two or three days. In the case of heated air drying, the padi is usually placed in A bin, dried in a few hours and removed from the bin. With heated air, drying can take place regardless of the weather because the air is heated up to 100 degrees above the temperature of natural air.

The batch process is most commonly used where the "lots" of padi are not too large. Operating cost in the United States for this type drying in round steel bins averages about US $0.32 per hundredweight.

In continuous flow drying the wet padi is loaded into the drier and circulated out the bottom and back into the top until dried. Heated air is used in most all cases. This method is basically a batch process and is so designed to expose all kernels to the hot air so that drying will be uniform.

With the intermittent pass continuous flow process the wet padi is passed through a heated air drier and placed in storage for six to 24 hours and passed through the drier a second time. This process is continued until the padi is dry. Usually the padi will go through the drier about three times before being dried to a safe storage level. All the handling is done by mechanical means and working bins are necessary for holding the padi between passes. Usually the drying time is about 45 minutes. Therefore, it is best suited for handling large volumes per day. Capacity of 25 to 300 tons per day are quite common in some areas. Investment costs are quite large but when compared on a capacity basis, it is quite reasonable. Drying cost for the multipass driers in the United States is about US $0.25 per hundredweight.

The "pass" procedure used for drying padi permits the job to be done in a reduced time and minimize stress checking. When padi starts to dry a moisture gradient soon develops, with the centre of the kernal being at a higher moisture content than the part of the kernel near the surface. The rate of moisture movement from the high moisture central part to the surface where it is removed from the kernel determines the drying rate and the in-drier time for a specific drying job. When partially dried padi is removed from its drier and placed in working bins, the moisture equalizes in each kernel. The equalization process moves some of the moisture from the center of the kernel nearer the surface where it is more easily removed when drying is resumed.

An example of the "pass" system of drying when using 140 degree air as compared to the one pass of continuous flow batch is as follows:

	One pass drying	*Multipass drying*	
		3 passes	5 passes
Drying time in hours	2	1.0	0.73
Percent head yield	less than 30	30	50

Lower air temperature will increase head yield and increase drying time.

Method of Drying for Malaysia

Which method of drying is best suited for Malaysian conditions? All types of drying can be used in Malaysia. There is, of course, one exception. Natural air drying will most likely not be successful. Batch type driers with supplemental heat and the continuous flow type will most likely be used in areas where high capacity is not required.

In the Muda Scheme where development plans call for 500,000 tons of padi per crop and where time between crops will be important, the multipass system is best suited

for high capacity drying. Research work on the multipass system of drying on locally grown varieties is urgently needed to establish operating procedures and even to serve as design guide lines for local manufacture of the driers.

On method of approach to drying in the Muda area would be to set up "drying centres" on a basis of one drier to serve a 5 mi. circle. The wet padi would be delivered to the "center" in sacks, mechanically handled in a multipass drying system and re-sacked for shipment to storage. This approach would reduce local transportation problems and at the same time fit into the traditional transportation and storage system. In the future, the transition toward bulk handling, ransporting and storage will no doubt prove feasible.

One point that must be considered in a development of this nature is that the marketing system must take into consideration the quality improvement with mechanical drying. It is well known that a 4 to 5% increase in head yields in milling is possible over the traditional sun drying methods as well as providing the miller with a more uniformly dried product. It seems that the farmer should share in this improvement.

Trained Operators Will Be Needed

Trained operators will be needed to handle the high capacity multipass drying system. Training in the mechanics of operation only will be just a small portion of the skills needed for successful operation.

The chief aim of an operator of a padi drier is to reduce the moisture content of the freshly harvested padi to safe storage levels with the minimum feasible loss in quality. He is restricted in his choice of operating conditions by permissible operation costs, characteristics of his plant equipment, and urgency of drying before spoilage takes place. For example, under wet conditions when the padi dries slowly in the field it usually is harvested at a high moisture content and is subject to rapid spoilage. The drying plant operator is then called upon to dry the padi in as short a time as possible and also must remove more than the normal moisture from the padi, while operating under the handicap of high humidity air. Not only must be the operator know the mechanics of operation, he must know the principles of drying so that when the plant is under "pressure " he can raise the temperature to increase moisture extraction and keep quality at a reasonable level

Research is Underway

A research program has been started in the Agricultural Engineering Section of the College on a multipass system of drying. A new technique has been added to the system that has shown promise of reducing drying time up to 50%. The technique involves a preheat device to raise the temperature of the padi up to 140 degrees F before it enters the moisture removal section of the drier. The objectives of the research are to obtain information for drier operation in the areas of air temperature, and exposure time in multipass drying as well as to evaluate the preheat technique and its application to the development of a super-capacity drier for Malaysian conditions.

PROSPECT OF BEEKEEPING

BEEKEEPING in Malaysia is still confined to relatively few Chinese farmers who keep local variety bee (Apis Mellifera indica) in a primitive way. However, there are also some enthusiastic who introduced Italian bee (Apis ligustica) into the country. They keep it commercially by using latest improved method which is known as frame hive beekeeping. While there are still some beehunters who search for wild colonies of bees and get their honey in a cruel way.

Methods of beekeeping:-

(i) **Primitive beekeeping** — This involves the collection of natural swarms and housed them in suitable containers. Most of our farmers use wooden boxes of varying sizes. Provision is made for the entry and exit of the bees. This is done by making several holes just big enough for the free movement of the bees. Preventive measure is taken in order to keep away lizards and other predacious wasps. A door is also made to enable the beekeeper to collect the combs. Honey is extracted from the honey combs by steaming them or squeeze them out mechanically.

(ii) **Frame hive beekeeping** — This improved method consists of movable frames in which bees are encouraged to build their combs. They are usually composed of several boxes, one on top of the other. The lowest box is used for holding the brood nest and the uppers for collecting the crop.

Its main advantage over the primitive beekeeping is that frame hives can be moved about and the beekeeper can take his hives to wherever nectar is abundant for the bees to forage. This also enables the beekeeper to manage his hives for the maximum production of pure and clean honey.

But the frame hive is difficult to make as it needs great accuracy. Of course, it is expensive to buy. Moreover it snould be intelligently managed and it requires a lot of knowledge of the biology of bee and bee forage.

Kinds of bees:

The lack of incentive of beekeeping here may be mainly due to the low productivity in primitive beekeeping. If we have the technical and managerial knowhows to domesticate our local race of bee, Apis melifera indica, in hives (which was reported to be easily managed) we may be able to increase the yield of honey from a few lbs to over fifteen lbs.

The imported Italian race, Apis ligustica, is a much stronger and better forager. But this temperate type of bee has been conditioned to temperate crops which bloom seasonally and more uniform in kind. Although it can be successfully established here, its honey yield is much lower than its native home. But its production of beewax is quite significant here.

The Giant Honeybee, Apis dorsat, is found locally in wild form. This is one of the most polific yielders in the world, yielding as much as forty lbs of honey per crop. But it is very aggressive. If it is disturbed, it will fly out in swarm and may sting man to death .

No success has been reported to keep this bee in hives. However, we hope that in future we may be able to name this through breeding work and other physical and biological manipulations. In this case, we can make use of its advantage of being native to this country.

Uses:

(a) **Honey** — It is a very nutritive food, as can be seen from the analysis of it:-

Water	13-20%
Simple Sugar (laevulose and dextrose)	32-37%
Sucrose	2%
Dextrin, maltose and gum	1-12%
Mineral constituents (ash)	0.25%
Enzymes (invertase, diastase, invulase, catalase etc.)	
Numerous vitamins	Small
Trace of protein	quantity
Free acid (malic, succinic)	
Colouring pigment	

Beside using it for direct consumption as a fuel for body energy, it is also used in the manufacture of bread and cakes; as insect attrahent added to various insecticides, and for a multitude of others especially in the medical field as "venicle" in medicine.

(b) **Royal Jelly** — It is a substance secreted in small quantity by worker bee for feeding the queen bee and infant. This is considerad as a richest natural food and is being successfully extracted and used as a stimulant for healthy body growth.

(c) **Beewax** — It is useful for making candles, cosmetics, polishes and pharmacautical preparations.

Besides providing us with the invaluable products as mentioned above, the bee itself is useful agriculturally as an agent of pollination for crops. Thus it increases the production of fruits and seeds.

Future (Prospects)

Nature provides us with luxurious growth of vegetation, which in turn provides our industrious bees with ample pollens and nectar all the year round. Such rich natural resources are awaiting for our future beekeepers to explore.

In view of our government's policy on agriculture diversification, beekeeping should be encouraged. Institution like our college, should in fact place beekeeping as part of our training programme. Judging from the urgent need of upgrading the living standards of the rural people, beekeeping would probably play a significant part in creating more agricultural activities for more income. Meanwhile, it will provide our rural folks with the nutritious honey.

References:-

(1) Beekeeping in the Tropics — Francis G. Smith
(2) Encyclopaedia Britainnica.

LAI WAN CHEE

AT BEING YOUR BEST YOU

Our lives can be just 'existence' going through the days with little hope cheer or plans for the future, or, on the other hand, we can find rich experience, joy, happiness and the realization of many dreams. It is for us to make our own choice. You may need to work a little harder at being your best you. Persist in any job by being more attractive. People judge you first of all by your looks. There is no real reason to be self-conscious. Just improve your mind and your interest.

Establish your set of values. Decide what is important to you, and throw off those habits which could gradually destroy your chances of achieving your geal. Ease of movement lends charm and creates the feeling in others that you are relaxed, and sure of yourself. Even though this may not always be so — make others think it anyway!

Work at developing your own individuality. Be orderly in your habits, serene of mind, clear of conscience and master of your emotions. Respect the privacy of others and assures your own. Be able to stand alone but willing to let someone lean on your shoulder when needed. You should sympathise with others' sorrow, but never expect the same from them over your own mistakes.

Understand your moods — why you get into them — how to get out. He who indulges in self-pity will get nowhere — no one. He drives away friends because the association is too depressing for them. Brooding does not solve the problem at all. Think about it — talk to yourself in the mirror if you must — but get over it or accept it. Learn to laugh at yourself. It is a talent that makes you adorable and lovable to everyone, and far easier to get along with. This ability will see you through many difficult moments. If you cannot laugh out — then smile, smile, smile. It helps more than you know. Listen kindly to troubles which others may bring to you, but be careful about discussing your own. Intimate emotional problems are best kept to yourself. Your acquintances really do not care.

Have patience. What you cannot cure, you must endure and try to do with grace and kindness, not with bitterness. Life always supplies an 'OUT' if you accept it with understanding and knowledge. NOTHING ENDURES FOREVER: THIS TOO SHALL PASS.

Learn that happiness is built within yourself, created by yourself. Sadness, disappointments, loss, should never make you unhappy. The charming man is the happy man. Though there may be several events of sadness, disappointment, or heartaches, when you know that you nave done everything possible to make them right, you can rise above all worries and maintain that inner peace which is true happiness. Harmony, peace, serenity, contentment are beautiful words — think about them, cherish them, realize them through prayer and doings.

Be at peace with yourself. When there is no peace within yourself, it is impossible to preach peace to anyone else. When you know deep at heart that you are physically lazy, mentally dull and emotionally defeated, change your direction. Such a state must be overcome or you will be destroyed. Dissolve your inner conflicts and regulate your desires, though they never meet. The effort to move towards your goul is PROGRESS. That sense of progress, that feeling of accomplishment will bring you peace.

Value a constant faith in God — without this you are weak indeed. Turn to your religion whatever it may be. Learn to pray more to God who will help your thoughts grow more definite, your ideas to take form, your dreams to become realities You will find comfort in sharing troubles with Him—Surrender to His will then. You will fail

often but failure occurs only when you do not make that one more start toward the good life. When there is faith in God, there is faith in yourself and in your future. Is not this ASSURANCE?

"Behind every successful man is a successful woman.' You can be either! And you will be appreciated, cherished, admired and loved. So why not strive to live up to your Ideals?

—— *The requirements for Happiness are not very great, Loving, and being loved — a dream to work towards — a full and interesting day* —

SITI HAJAR AHMAD
Tahun Satu.

PEPPER CULTIVATION IN SARAWAK

PEPPER has been cultivated in Sarawak since the middle of the nineteenth century. The methods used have become traditional and the following brief description is intended to be a guide to pepper planting practicss rather than to be an agronomic description of how pepper should be planted.

Land intended for pepper planting is cleared of vegetation and burned. It is then dug with changkols. Roots and plant remains are removed from the field. After which, mounds are built. On level ground, the mounds are usually spaced at eight feet square. However, this planting distance can be varied from six and a half to twelve feet square according to the terrain of the era. Terraces are generally not constructed, because the farmers believe that such a procedure would involve the removal of the valuable top-soil. Moreover, the construction of such terraces requires far too much labour and money as compared with their usual practice. This accounts for considerable soil erosion during the Landas season.

Planting material is cuttings from plants not older than twenty four months or prune-offs during pruning of vine. These cuttings are normally planted direct into the field. But it is better to use a well shaded nursery. It is preferable that they be planted on small mounds. The newly planted cuttings have to be shaded with fronds of ferns until the cuttings have firmly established themselves. Planting of the cuttings is usually done in the rainy season so that a higher rate of survival may be achieved. Generally, a temporary support for each cutting is used and later it will be substituted with a strong hard wood permanent support.

At regular intervals the farmer trains the developing vines up the supports by tying the creepers to the supports. The vines have to be pruned regularly. The first prunding takes place when the terminal shoot has developed eight to nine nodes. The shoot is cut six inches above the ground level. Similarly, the two top, lateral branches from the second and third nodes are pruned. When the three stems each have developed ten nodes, they are pruned three nodes back. But this is not normally practised by farmers if branches are produced at each node. The pruned off branches can be used as planting material. Pruning is done until the vines have reached to the top of the supports where any further growth will be pinched out.

It is a common practice to allow the vines to fruit only 18 months after the planting of the cutting. Prior to this, flowers developed are plucked off to allow time for the stems to grow stronger before they must take the weight of the berries. Picking of the flowers and weeding consume most of the labour spent in any new pepper garden.

Weeding is usually done with the changkol, but some farmers use herbicides like 'Gramoxone'.

Quite a variety of fertilizers are in use. Those commonly use include soyabean, soyabean cake, sterameal, prawn dust, guano, NPK 4. Recently, new inorganic and cheaper fertilisers have beeen recommended by the Department of Agriculture. The fertilizers have a formula of 12% nitrogen, 12% phosphate, 17% potash, 2% magnesium oxide plus several trace elements. Research has shown that these manures are better than the traditional fertilisers. An extra dose of 2 lb. of dolomite prior to application of the new fertilisers has proved to be beneficial, as the soils are normally very low in magnesium.

Only a small quantity of fertilizer is required by the immature plant, but at maturity, the plant requires larger quantity. A farmer fertilizes his vines a few days after the completion of each harvest. But this is preceded by weeding. Their fertilizer is placed in trenches made about half of a foot from the vines at the sides of the mounds. The vine is again fertilised forty to fifty days later when it flowers. A third dressing of fer-

tiliser may be applied. The number of dressings each year depends on the market prices of pepper and on the financial position of the farmers.

Harvesting is carried out at weekly intervals. The berries harvested can be processed into two forms of market pepper: black and white. For producing white pepper, the berries are harvested when a number of the berries on the spike turn red. During harvesting, big ripe berries usually intended for white pepper production are put into one basket and the small berries which are only suitable for processing into black pepper are put into another basket.

In white pepper production, the harvested berries should be put into sacks and soaked in a pool or stream for 7 to 14 days so that the outer skin or the pericarp of the berries will rot. Pepper berries soaked in running water produces creamy white pepper grains whereas those soaked in stagnant water gives greyish white pepper of lower grade.

When the pericarps have become well rotted, the berries are emptied into a bamboo tub, trampled on and then washed. The pepper corns thus obtained must be sun dried for about 2 days to reduce the moisture content to about 15%. This white pepper can then be pushed into the market.

Black pepper is produced by just thoroughly sun dry the berries. The berries are separated from the spike by rubbing the spikes with the feet. As complete drying of black pepper takes several days of full sun, the processing of black pepper consumes more labour than white pepper. And, the price of black pepper is usually lower than that of white one. The price differential is an incentive to the farmers whether white or black pepper should be produced.

Foot Rot Disease is a serious menace to the pepper industry in Sarawak. Breeding work on the crossing of the local high yielding. Kuching variety with the Indian and Indonesian disease resistant varieties is in the process. A cure for this disease has yet to be found. White Root Rot Disease is the next serious disease of pepper. Other diseases are Pink Disease and Thread Blight. Though not very serious, they are causing considerable damage in many farms.

Pests like green pepper bug, pepper tingid bug, pepper weevil, mealy bug, scale insects and tree hoppers are commonly found in pepper garden. Most of the farmers know how to control them with pesticides like agrocide, nicotine, BHC gama and malathion.

The major jobs to be done in a pepper farm are weeding, fertilizing and harvesting. Other work include spraying of pesticides, digging trenches to improve drainage, making mounds, and removing leaves and flowers on the immature vines.

A new method of growing pepper known as 'hedge training' has been developed. The advantage of this method, compared with the traditional method of planting pepper is that it makes work easier — pruning, pest control, harvesting, etc. Indications show that yields per acre will be higher and cost of production of market pepper will be cheaper.

To conclude, I would say pepper cultivation can be made easier and better by applying new and improved cultural methods and using improved varieties.

LEI CHION HUNG
2nd Year.

OBSERVATIONS ON MEAT UTILITY OF LOCAL CATTLE*

by C. SAMUEL
Animal Science Department.

BEEF production of local cattle is low. This has been a factual acceptance by experts and is the result of complete absence of husbandry practices. Little or no work appears to be done on what the production standards are. Where beef production is concerned it has been a common practice to give an arbitrary figure on dressing out percentages of local cattle based more on an assessment from butchers and livestockmen then from actual weighted carcasses. Under local conditions it is the butcher who is essentially involved in evaluating the value of the animal for beef. He is closely associated with the animals from the time of purchase to the time of slaughter. In essence he not only selects the livestock but also provides the cuts for the table.

Local butchers generally assess the value of an animal for beef by the amount of meat recoverable after slaughter i.e. the meat utility of the animal. The assessment is done by "Eye" the age, size and condition being taken into consideration. This visual assessment is generally a correct one and is accepted by the cattle owners. The price is agreed to and the animal is removed to the nearest abbatoir. The animals that are generally available to the butcher are of 3 types namely:-

(1) Kedah/Kelantan type — These are indigenous in the country and are not entirely characteristic of the Zebu type. They are asmall in size and of late maturity but hardy and well adapted to local conditions. The animal are kept in free range conditions in Kampongs, dusuns and in plantations. Red is a common colours but variations do occur. Management is negative. Concentrate feeding is hardly available and the main purpose of rearing these animals are for local consumption or for sale to the butchers.

(2) Local Indian Dairy — These are mainly Zebu type animals available in Urban areas and Rubber Estates. Bulls are readily sold at about two-three years of age. Cows are sold when they are past their prime.

(3) Swamp buffaloes — These are big sized animals with broad forehead and long curved horns. Their common colour is black but albinoidism does occur in a number of animals. They have broad barrels and are slow moving. They are subject to extremes of temperature and are usually rested at midday. They are kept for work in the paddy fields are very hardly and need minimum care and attention. Paddy fields and roadside verges are their grazing grounds, swamp and water logged areas their habitat.

To determine the dressing out % of local cattle and swamp buffaloes in Malaya 15 bulls of the Kedah/Kelantan bred and 15 buffalo bulls of 1½ to 6 years were examined. Animals were slaughtered at the Town Council abbatoirs in Sg. Patani Kedah. The division of carcass was made in accordance with local practices. The procedure adopted was as follows:

(a) Animals were weighed 24 hours before slaughter

(b) Animals were slaughtered at the abbatoirs in the early hours of the morning skinned and the carcass divided into the following sections: Head, Neck and barrel, forelimbs, hindlimbs, organs stomach and intestine, feet (trotters) and skin.

(c) Weighing of various section of carcass and organs

(d) Weighing of bones.

RESULTS

OXEN

No.	Tattoo No.	Age Year Month	Live-weight in. lb.	Dead weight in. lb.	Meat weight in lb.	Bone weight in lb.	Meat weight to live weight %	Carcass weight to live-weight %
1.	B1353	1.4	350	149	103 1/3	45 2/3	29.51	42.56
2.	B1880	1.4	400	177 2/3	134	42 2/3	33.50	44.41
3.	B1351	1.5	336	130 2/3	109 1/3	21 1/3	32.53	38.88
4.	B1350	1.6	399	176 1/3	124	52 1/3	31.07	44.19
5.	B1352	1.8	238	113	73	40	30.67	47.47
6.	B1343	1.9	336	135 2/3	90 2/3	45	26.98	40.37
7.	67046	1.11.	364	178	129	49	35.43	48.90
8.	64547	2.6	408	175 1/3	127 1/3	48	31.2	42.96
9.	C5299	3.3	485	251 1/3	196 1/3	55	40.47	51.82
10.	A5051	3.3.	455	216	162 2/3	43 1/3	35.73	47.47
11.	A5818	3.7.	441	194	138	56	31.29	43.99
12.	A46036	3.9.	413	184 2/3	127 1/3	57 1/3	30.83	44.71
13.	A5840	3.10.	441	170	116 1/3	53 2/3	26.37	38.54
14.	66745	4.0.	476	221 1/3	156 1/3	65	32.86	46.49
15.	60037	4.10.	480	239 1/3	198	41 1/3	41.25	49.85

BUFFALOES

No.	Tattoo No.	Age Year Month	Live-weight n lb.	Dead weight in lb.	Meat weight in lb.	Bone weight in lb.	Meat weight to live-weight %	Carcass weight to live-weig %
1.	C6329	1.6	455	226 2/3	158	68 2/3	34.72	49.81
2.	—	1.8	469	244	168.66	75 1/3	35.96	52.02
3.	—	2.0	588	284 2/3	204	80 2/3	34.69	48.42
4.	A8891	2.6	616	305 1/3	204.66	100 2/3	33.22	49.56
5.	B1822	2.5	672	298 2/3	212.33	86 1/3	31.59	44.43
6.	B1180	3.0	672	314	218.66	95.1/3	32.53	46.72
7.	—	3.3	581	285 1/3	174.	111 1/3	29.94	49.11
8.	Af125	4.0	756	322 2/3	219.33	103 1/3	29.01	42.67
9.	—	4.0	756	266 /23	184.66	82	24.42	35.27
10.	—	4.6	791	368	263.33	104 2/3	33.28	46.52
11.	V1532	4.6	758	364	262.66	101 1/3	34.63	48.02
12.	V1504	5.0	856	376	275.33	100 2/3	32.16	43.92
13.	A8396	5.4	854	296	222	74	25.99	34.66
14.	23833	5.6	854	307 1/3	213.33	94	24.98	35.98
15.	44344	6.0	924	394 2/3	307.33	87 1/3	33W26	42.71

Conclusions: From the tabulated results above the amount of meat recoverable is very variable. Meat utility in local cattle appears to be inconsistent with the age of the animal. Bone weight is relatively high and is a determining factor in the meat utility of local cattle. Under present methods of management live weight of local oxen of different age groups are subject to great variation and cannot be standardised. In buffaloes a progressive increase in live weight is noticed according to age.

SERDANG: 4th November, 1967.

A PROFESSIONAL FARMER'S VIEW ON VEGETABLE GARDENING

An old farmer who took up farming for nearly half a century, had shown a great interest towards modern agriculture. He kept a close watch on our practical training for nearly two years, hoping that he could adopt some improved technique for his own farm. But he was quite disappointed. I have an opportunity to discuss this matter with him and he enlightened me with the following ideas and suggestion:

Efficient use of tools

Changkul is the most useful general purpose tool for construction of beds, weeding, harvesting root vegetables and others. However, if better efficiency is to be obtained, appropriate types of changkul should be chosen for different nature of work. To illustrate, if we use a heavy changkul for weeding purpose, we would get tired in no time and have very little work done. Thus a changkul with broad and thin blade and light handle is recommended. Similarly, changkul with comparatively narrower but stronger blade is used for constructing beds on heavy soil. Of course, changkul must be sharpened whenever necessary and fixed firmly at a correct angle (about 85° between handle and blade) which will give an optimum cut.

Tajak is not a suitable tool for weeding in vegetable beds, especially when the latter is planted with tender vegetables at close proximity. Its one-side nature reduces the accuracy of cut. Consequently it causes a lot of unnecessary damage to the crop in the process of weeding. Moreover, it is more difficult to direct the force to work. This inefficient tool should be replaced by a changkul of suitable size.

Weeding

For efficient weeding, we should make a horizontal cut at about $\frac{1}{4}$ to $\frac{1}{2}$ inch below soil surface. This is to ensure that the growing point of the plant is cut off. But most of our beginners make the mistake by making either too deep or too shallow a cut. We must realize that our purpose is to cut off the weeds rather than to uproot or bury them. Soil should be disturbed as little as possible, so as to facilitate rapid killing of the weeds. If we covered the uprooted plant with soil, we are just transplant the weed!

Construction of seed beds

Most of us still construct our beds in an akward manner. So much time and energy is wasted just because we do not know how to hold the changkul properly, stand in a good working manner and move the soil to right place.

It is also economically not feasible and time consuming to mix the soil thoroughly with cowdung. The latter can be applied evenly in a layer at about three inches below the surface of the bed.

Cultivation

Improper preparation of seed beds, together with poor planting and transplanting technique may be the reason of our poor success of vegetable gardening. Besides, wrong methods of mulching and wrong application of fertilizer also affect crop yield.

Properly manipulated soil is the key to successful plant growth. We usually find that beginners overdo their work. For instance, the step of seasoning seed bed, i.e. prior to basal dressing, bed is constructed, mulched and watered, is unnecessary. Sowing kangkong, Loh Pak and other small seeded vegetables by counting the number of seeds per planting point is not a good economical practice. Except for tender leaf vegetables, watering more than once a day will not do any good, and might even cause water-logging. In fact for most hardy vegetables, we can water them on alternate days and even at a longer time lapse. More weting of the surface or just water right on the spot where the plant is grown does not help much. The whole bed must be evenly watered.

Forking vegetable bed thoroughly at frequent interval for keeping away weeds is not justified by the damage it causes to shallow rooted, tender crops and the time it consumed. Weed can be controlled more efficiently by using sharp changkul.

We were told that mulching can do a lot of wonders in conserving soil organic matter and many others. So we do intensive mulching in our vegetable beds and expect to get a much better yield out of our crops. But we get a negative result. The theory of mulching does not hold good in our local conditions! It hinders the evaporation of excess moisture, which may be due to heavy rainfall or excessive watering. Under such conditions, root growth is retarded and soil pests and diseases prevailed. Further more, it shades off sunlight, which is essential for the germination of the sown seeds.

Talking about vegetable nurseries and transplanting techniques, we still have to learn from experienced farmers:- They do not grow more than one seedling per square inch on the nursery bed and they usually do not transplant it until it reaches a height of four inches or more. Seedling is treated with insecticide just before transplanting. Caution is also taken to ensure that every seedling is of equal size and vigour and with maximum amount of roots and soil attached to it. Transplanted seedling is given its best attention so that it can establish "comfortably" in its new environment. This involves proper placement of the roots in the planting hole, suitable depth of planting and adequate pressure on the soil to make the seedling stand; watering, shading, fertilizing, weeding, diseases and pests control and other best possible methods of maintenance.

At this stage, we must realize that farming is usually a low interest and labour consuming occupation. Therefore, we must be economical both in capital and non-capital field in order to earn a living. We always accuse farmers of doing bad practices as they do not do what we do. In fact beginner like ours are practising the worse.

There is no point of doing any such field treatments, when we do not even know how to construct a good seedbed, apply fertilizers properly and do subsequent maintenance in a right way. The result will be inaccurate, not practical and misleading.

What experienced farmers appreciate most are perhaps the introduction of new scientific discoveries such as fertilizers, insecticides, improved planting materials, efficient farm machineries and equipment, and practicable, improved techniques. A lot of traditional techniques practised by farmers still hold good under our conditions. We should appreciate them and learn from the farmers before we can do any effective improvement on them.

It is concluded that we are by no means experts of farming and can go on advising farmers to adapt our modern farming technique. Textbooks and lecture notes would probably give some outlines of our practical agriculture. It only serve as our guide. Our practical training still has a long way to go before we can master these basic farming techniques.

Acknowledgement

The writer wishes to express his sincere thanks to the old farmer (whose name, as requested, is not disclosed) for his critical but constructive ideas and suggestion given.

ALONE

My self,
this lonely night
and I gaze at the twinkling stars
oh! how peaceful,
how quiet,
nothing,
save the sound of the weeping wind
is the sad music of the night
and of me.

I join the serene symphony
with my heart o! bleeding.
Myself,
this lonely night
oh tears are the only friend.
And tears, sweat and blood
be my company
for this battle I'll fight
by myself
alone!

MAZLAN 2G

.....dalam perjalanan

Duhai teman
kalau dikau mengembara
toleh-lah kapada ku
dan dikau sudikan ku ngembara bersama.

Ku tahu-lah dikau punya hati
begitu rela menerima kaseh
sebab hati-ku pun sesama berseh.

Kan hidup ini
bukan perjalanan lurus
dan di-setiap perjalanan
bukan-kah molek kita berteman.

(buat k.s. yang ku temu dalam perjalanan) MAZLAN 2G

'ADAT RESAM MENANAM PADI DI-JOHOR

KAMPONG Sepinang terletak lebeh kurang lima batu dari bandar Segamat Johor. Pendudok-nya hari ini tidak-lah ramai, hanya dalam lengkongan 300 orang sahaja. Tetapi apa yang hendak saya bentangkan di-sini ia-lah serba sedikit darihal 'adat resam menanam padi yang di-warithi dari zaman ka-zaman hingga-lah ka-hari ini. Perlu juga saya tegaskan di-sini bahawa 'adat yang di-ikuti sekarang tidak menyerupai 'adat dato' nenek kita dahulu kerana dari tahun ka-satanun sedikit demi sedikit daripada 'adat ini hilang menjadi cherita dongeng sahaja.

To' Pawang memainkan peranan yang penting sekali sa-masa menjalankan 'adat menanam padi. Ia di-anggap sa-bagai Ketua kawasan kerana ia-lah yang berkuasa menetapkan hari yang baik sekali untok menyemai, mengubah dan menuai, dan ia lah juga yang mengepalai suatu 'adat itu. Ada lah salah dari segi 'adat jika sa-kira-nya ada orang yang mendahului dari To' Pawang tadi. Jikalau To' Pawang sudah menjalankan satu 'adat itu, pengikut-nya tidak perlu mengulangi-nya lagi, tetapi tidak siapa pula yang melarang-nya membuat di-kawasan-nya pula.

Maulud Padi Beneh

Majlis ini di-adakan2 atau sa-hari sa-belum menyemai. Orang2 ramai yang berhajat menanam padi pada musim itu di-panggil berkumpul beramai2 di-suatu tempat, saperti di-surau atau di-rumah To' Pawang, masing2 membawa sa-bahagian daripa a padi yang akan di-samai kelak. Di-ketuai oleh To' Pawang, mereka ini pun Maulud Nabi. Di-akhir majlis ini, padi masing2 di-renjis dengan ayer tawar yang di-sediakan mula2 tadi.

Hari Permulaan

Pada hari yang tersebut, To' Pawang bersedia dengan kemenyan yang sudah di-tangkal. Kemenyan ini di-bahagikan kapada mereka yang hendak menanam padi dalam musim itu. Mula2-nya To' Pawang sa-bagai sa-orang Ketua, atau penolong nya, membakar kemenyan itu di-tempat permulaan menyediakan sawah, kemudian baharu-lah di-ikuti oleh pendudok2 yang lain di-tempat permulaan masing2. Tujuan utama membakar kemenyan ini ia-lah supaya menjauhkan daripada musoh2 padi, dan juga agar tuan2 punya tanah terpelihara daripada mara merbahaya. Sa-lama tiga hari berturut2 pendudok2 ini bertungkus lumus menyediakan sawah mereka, saperti menerang rumput rampai dan membajak. Pada hari ka-empat mereka ini pantang bekerja hingga lah hari ka-lima.

Hari Menyemai

Sa-belum tiba-nya hari menyemai yang di-tetapkan oleh To' Pawang sendiri, orang2 ramai menyediakan tapak semaian masing2. Di-tengah tapak ini sa-orang itu membuat sa-buah kepongan. Di-dalam kepongan ini-lah kemenyan yang baharu di-tangkal di-bakar. Sa-lepas itu, sa-orang itu menugal tujoh lubang di-dalam kepongan tadi, tiap2 satu di-isi dengan padi yang sudah di-rendam. Apakala selesai, baharu-lah boleh di-tabor padi semaian, sa-luas-luas tapak semaian.

Padi terbit

Dalam masa padi sedang terbit dan mulai berisi, satu achara lain di-perlakukan. Tuan2 punya tanah mengambil bunga kantan dengan batang-nya sekali dan di-chuchok-nya di-tempat permulaan ia mengubah. Achara ini di-lakukan ia-lah kerana mereka menganggap padi terbit ini sa-bagai sa-orang ibu yang hamil menggidamkan ulam dan bunga kantan itu-lah di-berikan sa-bagai ulam.

Menghalau Burong2

Ketika padi sedang bunting, burong2 terutama sekali burong pipit mulai berkeliaran berkawan2 bak awan mendong di-angkasa raya. Jika ada sa-kumpulan burong2 ini turun hinggap ka-padi mereka, orang2 yang benar2 ta'at kapada 'adat, hanya menghalau burong2 ini saperti ayam sahaja, "Shoh, shoh, shoh....." Ini ada-lah kerana

'adat melarang mereka membuat bising saperti menjerit dan melaung. Ini berma'ana mengetok tin2 burok dengan chara menarek dawai, atau pun mengonchang buloh2 yang pechah, di-larang sama sekali. Mengikut keperchayaan, kalau sa-orang itu membuat bising maka banyak lagi burong2 yang akan datang.

Penyakit2 Padi

Dalam masa padi sedang naik, jika ada satu2 penyakit saperti daun2 merah, atau diserang pianggang dan ulat2 serangga yang lain, pertolongan dari To' Pawang ada-lah di-perlukan. Uba yang di-dapati dari To' Pawang tadi hanya-lah berupa ayer tawar yang telah di-tangkal. Ayer tawar ini-lah kemudian-nya di-renjiskan ka-tempat diseranggi penyakit dan juga tempat yang lain. Hari yang ka-empat sa-lepas merenjis, tidak sa-orang pun di-benarkan masok ka-dalam sawah masing2, sa-hingga hari ka-lima.

Persediaan Menuai

Sa-hari sa-belum hari menuai, ada-lah menjadi suatu tradisi bagi tuan punya padi, bersiar2 keliling kawasan-nya, dengan tujuan menjemput semangat padi. Sa-sudah itu ia menyimpul daun2 padi di-empat penjuru kawasan-nya, takut kalau2 semangat padi itu lari. Kemudian-nya ia mengikat tujoh rumpun padi sabagai tanda tempat permulaan ia menuai pada ke-esokan hari-nya.

Hari Menuai

Sa-belum pergi menuai, tuan punya padi, di-kehendaki meminyakkan dan menyikat rambut-nya dengan rapi, konon-nya dengan jalan ini ia dapat mewangikan padi-nya. Ia di-kehendaki juga makan nasi dengan kenyang (bukan dengan makanan yang lain). Sa-lepas ini baharu-lah molek ia pergi menuai.

Sa-lagi belum penoh bakul-nya yang pertama, maka sa-lama itu-lah ia tidak boleh berchakap dengan sa-siapa pun. Apakala penoh sahaja bakul-nya yang pertama, ia segera pulang ka-pondok padi-nya untok di-simpan di-tempat khas di-panggil 'gelubor'. Pekerjaan menuai di-teruskan sa-lama tiga hari. Hari ka-empat ia-lah hari berpantang menuai, tetapi pekerjaan ini di-teruskan pada hari ka-lima dan sa-terus-nya hingga selesai padi di-tuai. Satu pantang lagi di-masa menuai padi ia-lah mengemping padi* . Sa-saorang itu di-larang mengemping sa-hingga kebanyakan padi-nya selesai di-tuai. Jika ia membuat-nya juga, To' Pawang akan murka dan akan melepaskan musoh2 padi buat menyerang padi-nya itu. Itu-lah keperchayaan orang2 kampong.

Bahagian To' Pawang

Di-akhir satu musim padi itu, dan sa-belum musim baru, Ta' Pawang ini mendapat bahagian-nya daripada mereka yang menanam padi. Bagi tiap2 200 gantang beras yang di-perolehi, sa-saorang itu patut membahagikan 2 chupak emping, 1 gantang beras dan 1 gantang padi kapada To' Pawang.

Pada tahun 1967 ada lebeh kurang 50 keluarga yang menanam padi, dan ada-lah di-jangka banyak lagi yang ingin turut sama menanam padi di-awal tahun 1968 atas faktor kenaikan harga beras dan kemerosotan harga getah. Sa-tiap tahun, jenis padi yang di-tanam ia-lah *Serendah-Kuning*, *Serendah Puteh* dan padi '*Bujang Berinai*', kasemua-nya masak dalam masa antara 6 ka-6½ bulan. Pulut hitam dan pulut wangi ada juga di-tanam orang. Namun demikian 'adat resam menanam padi ini akan tetap di-jiwa pendudok2 kampong Sepinang ini, buat beberapa tahun yang akan datang.

MOSTAFA M. S.
Tahun Pertama.

* Mengemping padi *Menggoreng padi muda dan menumbok hingga tipis.*

MAINTENANCE OF OIL PALM NURSERY

by CHEE CHUAN CHAI

MAINTENANCE of oil palm nursery is very essential not only from standpoint of good growth and control of diseases but also reduced competition in nutrients, water and light. Well planned and timely maintenance of the nursery will cost much less than to correct the subsequent hazards of trying to save money by cutting down the important nursery operations like watering, weeding, mulching, manuring and pest and disease control.

WATERING.

Regular and adequate watering is one of the most important operations in the nursery especially if for any reason, an unusually dry spell is experienced after planting. Watering should be done after about fifth day without rain and it should be done liberally to completely wet the soil — about one gallon of water per seedling is adequate but 2-4 gallons are preferable. During prolonged drought, this is repeated every 4-7 days until the seedlings are successfully established. In big plantations, manual watering is substituted by overhead sprinklers. Once the leaves of seedlings form a closed canopy, the shed beneath the canopy greatly reduces soil moisture loss by evaporation and thus minimises irrigation needs. Generally, during the first six months of nursery growth of palms that the water requirement is great and essential while after that period they have developed fairly extensive root systems which can exploit reserves of soil moisture present at a depth of 2-4 feet.

Poor supply of water to the palms will result in:-

a) Raising of plant temperature and thus slowing down the physiological processes.
b) Reducing the turgidity of plants and subsequent wilting of leaves.
c) Poor mobilisation of nutrients.
d) Eventual death of seedlings.

WEEDING

Weedgrowth should be kept to a minimum because if they are allowed to grow freely in the nursery, they will compete for water, nutrients and light. Weed control in young palms is normally done manually as the use of herbicides such as 2.4 D or 2.4.5. T can be dangerous and therefore undesirable. However, pre-emergent herbicide such as Simezine may be used but this is expensive and effective only on certain types of soil.

When clean weeding, care must be taken to avoid damaging the young root system or producing a saucer-like depression around the palm. Handweeding will normally entail a light superficial soil cultivation but it is not definitely known whether or not extensive regular cultivation of the soil in oil palm nurseries is good or a bad practice. A broken tilth may improve soil aeration and rainfall acceptance but it may also increase erosion, soil-moisture evaporation and will prevent the use of preemergent herbicides

Weedgrowth in nursery poses the following problems:-

i) Competition for water, nutrients and light.
ii) Harbouring pests such as rats and insects.
iii) Creating a moist surrounding round the base of tne seedlings and thus forms a good place of fungal growths. e.g. Anthracnose.
iv) Reducing the resistance of palms to diseases.
v) Giving difficulties in other maintenance operations like manuring.
vi) Hindering movements in nursery.

MULCHING.

Problems of soil consolidation and erosion can often be minimised by mulching the

surface of the soil in the bags or on the ground. Mulch is also used to control weedgrowth. Whatever material is used it must be well-rotted, for if the rotting process continues after the mulch is applied the heat of fermentation may cause damage to delicate tissues at the base of seedlings. Most commonly available material for the oil palm nursery are the empty bunches which are used and eventually supply nutrients to the palms. The empty bunches should be weathered for at least 10 days to lower the C/N ratio leading to temporary N deficiency. It should be spread not more than one layer thick, and should be disturbed periodically to eliminate pests like rats and rhinoceros beetles.

Mulching offers the following advantages:-

i) Prevents soil consolidation through impacts of rain
ii) Prevents soil erosion.
iii) Keeps soil cool
iv) Suppresses weed growth
v) Supplies seedling-palms with nutrients
vi) Reduce soil moisture evaporation and therefore retain moisture for palms.
vii) Absorbs moisture.

MANURING.

For optimal development in the nursery, it is essential to supply the young growing palms with adequate quantities of plant food. This is done by using compound fertilizers and the most generally useful ones are the granular types in formation of 15:15:15; 12:12:17:2 and 13:13:20 and should be applied at monthly intervals according to schedule below. These rates of application should only be considered as a general guide and may require adjustment depending on soil, climatic and growth conditions.

SCHEDULE OF MANURING USING A COMPOUND FERTILIZER

(12:12:17:2)

Age (*in Months*)	Quantity per plant.
5	$\frac{1}{4}$ ozs.
6	$\frac{1}{2}$,,
7	$\frac{1}{2}$,,
8	$\frac{1}{2}$,,
9	$\frac{3}{4}$,,
10	$\frac{3}{4}$,,
11	1 ,,
12	1 ,,
13	1 ,,
14	$1\frac{1}{2}$,,

The fertilizer should be broadcast evenly around the seedling to cover an area of 1" from the base of the palm to the limit of frond spread and the soil surface lightly scratched at time of application. Scratching the surface prevents soil compaction and also allows for a more even distribution of the fertilizer. Fertilizers must be applied carefully and should not make contacts with leaves otherwise leaf scorch will result. All plants should be given same quantity of fertilizer in order that satisfactory nursery culling can be done when transplanting to the field.

PESTS AND DISEASES.

Control of pests and diseases should be aimed at prevention or dealing at initial stages of attack. Their prevalence can be reduced by keeping the nursery and its surrounding area clean i.e. good sanitation of the area. Controls can be Chemical, Biological and Cultural — whichever one is cheap and practicable to the conditions of the nursery. Some of the main pests and their control are:-

i)	Apogonia	—	Spray with 1 lb. of Lead Arsenate in 25 gallons of water per acre.
ii)	Oryctes	—	Eradications of breeding gronds.
iii)	Crickets	—	Soil drench with 1 oz. Dieldrex 15 in 2 gallons of water.
iv)	Grasshopper	—	Spray with 1 lb. of lead Arsenate in 25 gallons of water at fortnightly.
v)	Red Spider Mites	—	Spray with Rogor 40 at 2 oz. in 12 gallons water.
vi)	Snails	—	Use snail baits.
vii)	Rats	—	Use rat cakes or Walferin.

The major diseases and control:-

i)	Anthracnose	—	Reduce humidity around the seedlings by removing shade, reducing watering. Also by spraying with 0.25% Zineb.
ii)	Curvularia	—	Weekly spraying of 0.2% Thiram, Zineb, or Captan.
iii)	Blast	—	Reduce soil temperature by shading, watering and mulching.

All the attacked seedlings should be removed quickly and destroyed by burying or burning them completely.

REFERENCE:- Planting Techniques for Oil Palms in Malaysia By J.W.L. Bevan, T. Fleming, B.S. Gray Agricultural Leaflet by Department of Agriculture.

CULTIVATION OF PADI STRAW MUSHROOM

by

LAI WAN CHEE

Second Year

A visit to the padi straw mushroom farm in Singapore revealed that it is possible to cultivate mushroom by using by-product of padi, i.e. straw and rice husk, but many other substrata of similar nature are yet to be experimented.

A survey of the market price of fresh mushroom, has revealed that it is a highly priced commodity — the price in the city's market being $5/- kati. Demand even at this price is high and as supply is limited, there appears to be a great potential in this industry.

With our crash programme to speed up self-sufficiency of rice in our country, there is a wide scope of making use of our padi by-products as a substratum for mushroom cultivation. Thus, this would enable our padi farmers to earn extra income.

Although cultivation of padi straw mushroom needs negligible amount of capital it requires skill and proper maintenance.

Beginners are normally misled by the over-simplified descriptions in textbooks regarding the various planting operations. One just cannot follow these too strictly as the authors may have used a different substratum or subjected the mushroom to an ideal growing environment which, due to the limited resources, a layman is unable to provide. Consequently the best way is to learn by experience. To learn the techniques from the commercial farm is no better than refering to textbooks, because to the commercial growers, the techniques of growing it successfully is regarded as an industrial secret. The only solution is to gather bits and pieces of knowledge from books, reports from newspapers and magazines and finally by observing commercial mushroom farms. However, the major work should rely on practical experiments and experience gained through trials and errors.

From what I know, the real problem of padi straw mushroom cultivation is the proper manipulation of the substratum in which the mushroom is grown. This involves:-

(i) Fermentation
(ii) Moisture control
(iii) Temperature
(iv) Pest and disease control.

There are thousand and one kinds of fungi and bacteria present in the substratum. Some may be beneficial and some harmful. The beneficial ones bring about fermentation and thus make nutrients available and give rise to optimum substratum condition (mainly temperature, moisture and pH) for the cultivated mushroom. The harmful ones are considered as weed fungi, as they are unwanted nonuseful, prolific, persistent, competitive and harmful to the cultivated species. Therefore, the manipulation of the substratum is to create a favourable environment for the cultivated fungi, and at the same time depress the multiplication of weed fungi.

We hope that through intensive experiments, we will be able to accumulate our knowledge of its cultivation gradually and subsequently being able to extend this knowledge to our farmers. If things go on smoothly, we would also like to look into the problems of storage and marketing.

(*This article is written by the request of the Publication Secretary*).

C.A.M. STUDENT SOCIAL SURVEY

A students' social survey was held in the College of Agriculture, Serdang during the 3rd term 1967/68. This survey was conducted to review the way of life, attitudes and thoughts of the present students.

Questionaires consisting of 51 questions covering the various aspects stated above were distributed to all Casuans to answer.

Out of 436 copies handed out, only 312 copies were returned. This makes a total of 71.6%, are the other 28.4% too shy to reveal their not-so-secret secrets or are they just too busy spending most of their time in College trying to void off their much dreaded 'shadow' called 'indifference'?

Consequently, the results of this survey were mainly based on the answers given by less than 312 students (that, incidentally, includes 11.2% from our fairer sexed students). 5% of the answers were completely defaced, so much so, that no evaluation could be done.

The students therefore 'laid their cards on the table' and lets see what they say:-

Religion:-

Of the total number of students surveyed, 52.17% are Muslims; 16.39% are Buddhists; 15.07% are Christians; 2.67% Hindus and lastly, 13.71% 'free thinkers'.

To what extend do our students treat their religions? Of all the believers, only 50.55% claimed that they do follow their religious teachings, while 11.63% believed but do not follow the teachings. 10.05% believe through fear of a supernatural and supreme being while 3.273% "Braile readers" admitted they just follow blindly. Finally, 12.37% said that they do not believe in God, but they do good whenever they see possible.

Maybe the older generations will give a second thought before saying that young generations are ..... admist the "A -go-go" and "ultra-micro-miniskirts" and under the various kinds of mop-tops! They still have kind hearts after all!

Age:-

56.549% are 20 years old and below
40.34% are 21 years to 23 years
and 3.103% are 24 years and above.

Characteristics of students:-

Eyesight:- 26.03% of our students go around dressed at the eyes (to see you better with, Red Riding Hood?) 55.82% do not wear glasses (spectacles) because of normal vision, some were extraordinarily gifted with powerful vision, that they had to put on "eye-dulls" (sun glasses) to protect their eyes from burning holes in mirrors or cloth (or do they just wanted their eyes protected while they did a little "astral travelling" in their yoga practices in the lecture theatres?) 18.15% wear glasses "at times only" (to avoid cracking the lenses too, often?)

Studies:- Can we assume the reason for low percentage of bespectacled students in College by the fact that 9.68% claimed that they could pass their diploma exams without spending any time on private studies at all? 64.16% spent an average of 1 to 3 hours on studies daily. Only 8.6% spent more than 4 hours and 17.56% were not certain how often they sat infront of their books!

25.43% go to bed after midnight; 65.3% after eleven o'clock while 8.59% sleep around 10 p.m. and boys-oh-boys, there are always some unique people anywhere, they (0.68%) sleep around 9 o'clock!

When asked which they did first in any action, viz. See first, Judge first or Act first? 69.26% claimed that they always see, act and then only judge the action done. 14.18% act through instinct!

Behaviour:- 85.52% always do things on their own initiative (born leaders?) 12.12% do work because others do it, and 2.16% said they work only if they can get popularity.

Coption (Cooperation) according to 75.34% said that there is co-operation -- when they rest because 2 persons are resting or 'banging' while all the other 8 members were working.

Etiquette:- When should good manners be used?

79.59% said that everybody should be well mannered at all times;
12.58% think that manners should only be used when meeting new friends and important people and 4.52% used manners only at parties and dances.

Here are 2.78% heroes/heroine who said that good manners should never be used at all! Why? Because it destroys masculinity! Finally 0.35% used good manners only when they felt like it!

Cleanliness:- How often do students change? (excluding underwears). The survey excluded underwears so as to reduce embarrasment to a few because they have recently develop a new technique to avoid wasting time changing them, that is, to wear them inside out when the outside get dirty!

28% change their clothing everything, 11.5% "spick and span" cleanliness seekers change 2 times a day, while 7% change once a week and 18.5% didn't remember when they last changed their clothings!

Interests:- Realizing that in this college, many students always complained that it was "frustrating" to stay 14 miles from Kuala Lumpur, now what do they do, then during their leisure hours?

The students occupied themselves with many activities some of which have been listed down in order of preference:-

Reading, games, sit down together and talk (pre to include grand mothers tales)!, sleep, T.V. radio and gramophone and of course, for some lucky guys (some described them as unlucky morons") go "big walking" round the campus.

It is believed by many educationists that more hobbies an individual has, the more idealistic, intelligent and generally, learned that individual is so judge for yourself:- 17.14% of our students have no hobbies at all; 16.79% have at least one hobby; 19.65% two hobbies and 46.42% many different hobbies which included many queer and unusual interests, that is to say, all the way, from collecting "2 legged butterflies" to collecting dried bones!

Reading:- Among the students here, 68.11% read newspapers (that includes devouring them after reading leaving no trace at all in the common room except crepes of printed material, er — left-overs!)

31.10% occassionally if they are early in the common room to coop up with the rush and 0.79% do not read at all.

Among the newspaper readers, the following topics are given in order of popularity:-

Everything	—	61.1 %
World affairs	—	12.28%

Comic strips	—	8.77%
Politics	—	7.9%
Sports	—	6.44%
Fashion	—	3.51%

Magazines and books in order of preference:-

Sex (non fiction and fiction)
General topics (including Agricultural bulletins, digests and novels) Movie magazines and Women's magazines (we do, of course, find a number of "Rose Chans" in the College)

Movies:- Can this be of help to our next film secretary in selecting films for shows in college?

29.55% are interested in Romantic films
20.32% in the secret agent-types
17.4% in sex
16.51% in war stories
and 16.22% in western films.

Smoking:- Realizing that large number of students smoke in College we braced ourselves to find out the reasons and quantity consumed daily (perhap it can help the cigarettes companies with our censors)

51.02% of our students smoke (some, as they themselves claimed "only occasionally")

40.26% smoke for relaxation
23.37% smoke for pleasure.
18.19% smoke for sociability
9.74% claimed that smoking "fag" is a necessity
4.54% admitted that they feel "more grown up"

with a fag in their hand, and 3.9% smoked to gain confidence!

Of all the "fag draggers", 40.95% started less than 5 years ago. Of these, 28.39% started the habit only after coming to College (due to sudden release from prisons at home or was it because they just like to see money dissociate into smoke and ash?)

55.4% consumed less than 5 cigarettes/day . This will inevitably increase as time goes by, of course.

28.06% consumed approximately 11 to 20 and 4.31% consumes over 21% cigarette daily. So the students here seem to say "who cares about cancer of the lungs, enjoy first and suffer later for there will be no pleasure without pain).

We note that at time of survey, some more matured individuals have switched from cigarettes to the chewing of pipes.

Origin for Agricultural diversification:-

41.89% of the students are from rural areas
33.11% from suburban areas
and 25% from urban areas.

This should give the country an even distribution of Agriculturists from the College. Judging from the above. do we see contradiction when only 33.56% entered College due to genuine interest in Agriculture? 16.29% are interested in serving the nation

(presumably through agriculture); 23.32% are more interested in more pay with a diploma; 23.32% entered because they wanted to go on "mugging " while 7.98% with no where else to go and 10.22% don't know what they are in for!

At present, 76.3% of our students are scholarship holders (Government, sub-government and commercial firms) 23.7% are what some called F.A.S. (abbrev. for Father's Agricultural Scholarship)

Although most of the 76.3% scholarship holders are bound by contract to serve their sponsors a number of years on graduation, 51.17% of the total population still would definitely like to go for further studies. 39.13% are not sure due to financial situations and 9.7% answered with a certainty of "no".

Sex in College:- To the average normal youth, sex is the most stimulating topic either in discussions or books. So assuming that our students have a reasonable knowledge of sex and its education, we ventured to find out many things which we think, might be of help to all in the selection of a life-length partner (or a rope round the neck for the unfortunate dopes!) in future.

Our students were average if not above and normal youths, so from their answers we can assume that it can be a general view of youth our age.

In choosing a partner, good character is the first thing to look for disregard of whether the "victim" is a beauty or a "mangkok", say 75.31% of our students. At the sametime, 16.88% admire beauty more than anything else. 0.63% sings "money can buy me love" and as long as the partner is rich, nothing else matters. 7.18% couldn't be bothered -- can these be what the story writers called the "man or women haters?"

Choosing partner is one thing, marrying one is another, 62.05% think we should marry for love, 23.76% consider marriage is just another obstacle in the wheel of life. 10.55% seeks for pleasure only in marriage (hope they have enjoyable times)

2.98% said that marriage is just not created for them and 0.66% were so confused, that they are not sure what actually is happening.

The ideal age for marriage in the case of men, according to 52.25% is between 24 to 26 years of age.

1.39% say that 23 years and under should be more appropriate (to be rid of frustration?) 46.36% prefer to grow older and settle down first before they get married at the age of about 27 or above.

Women? 65.37% like to see girls marry at 23 years or below (a case of "don't give chance?")

33.08% would like to marry girls of 24 to 26 years. Only 1.55% think that women should get married only after attaining the age of 27 or above.

The key to wedlock to 73.69% of our students was the 4-lettered word called "L-O-V-E." They are not hindered by the fact that the partner may be a pauper or a royalty. 5.26% will be happier in life once they get married to a degree holder, while 2.81% look for equal status — Diploma holders. (But we do have more than 2.81% of "big walkers" around the campus — something wrong somewhere? Of course, we must remember there are also many "silent admirers" around too) 14.73% prefer to school certificate holders as life partners and 2.16% are so choosy that they will never marry unless an uneducated angel comes along (inferiority complex?) While as usual, we have 1.4% "confoosed" individuals who have no idea yet.

After dealing with the theory aspect of male-female association. We get bolder and find out how far do college student go about in practice — either in their "moosing" or going "one step beyond".

In real life, 3.32% are shy among even in the midst of member of the same sex. (we couldn't think of a reason, can you, readers?) and 0.83% do not mix at all.

23.17% either put their heads into the ground or run at the sight of the opposite sex and 7.33% had never mixed with the opposite sex at all. Yet, 67.33% in college claimed that they have many friends; 20.7% with few friends; while 10.35% indifferents who couldn't care less and 1.72% "lone rangers" i.e. no friends — no enemies.

Of the total student body, only 35.98% have at least a steady each to their credit. (including some have been known to be called "man-with-many-girlfriends!). 64.02% are still, we presume, still hoping that one might fall down from the sky, someday, somehow!

Despite of many without steadies, 59.57% have somehow found the opportunity to hold hands with members of the opposite sex other than dancing.

As for "big walk" (going steady) in college:-
74.92% considered it as natural where boys and girls mixed rather freely.
15.58% think that "big walk" is for suckers only! (Do we smell sour grapes in the air?) 9.27% claimed that it is immoral!

Kissing, to the younger generations, is seen only in magazines and films, but not our college students, 52.9% have had the opportunity to put what have seen into practise. (We are not saying that hell has broken loose or something like that just because of such a minor information, but how many "non-kisses' people have ever wondered to seek the advice of the "kissed" to help break the ice to get their first kiss (if they have the guts to).

Premarital sex:- 51.07% thinks that there is nothing wrong between willing partners. 37.14% say that it should good for experience. Seeing that we were going to put in the last question in the questionaire, we don't think that the students will throw the papers into the waste-paper basket, so we closed our eyes, and wrote in — "Have you experienced sexual relationship (intercourse)? — a rather personal question.
There are, of course, some married students in the College, the total we made out was that 17.5% have really experienced sexual relations.

In conclusion, the survey covered all aspects of the social problems faced by our students. We ask them, that, wherever they see fit, correct themselves to fit into the Serdang society. Certainly we do not expect graduates to go out without a friend, or enemy for that matter, well, that will be the case if we stay indifferent too long!

NOTE:- *We would like to thank all the students for having very kindly co-operated in making our Survey a success. Our special thanks to those kind souls who helped to type out the questions and evaluate them.*

Survey conducted and reported
by
LAI CHIN FOOK
with
TANG KWANG HOW.

THE PROSPECTS OF OIL PALMS IN MALAYSIA.

by

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INTRODUCTION

THE oil palm industry has been in existence in this country for some 50 years and is at the moment experiencing, what is so far, the most exciting period in its development in view of the large expansion of acreage and of all that is entailed in such expansion and the current intensification of research. There is no doubt that the oil palm industry is becoming a very great agricultural industry in Malaysia, and may eventually rival the rubber, tin and timber industries in importance.

The oil palm industry has passed through three main phases [1]. Firstly, an experimental phase during the first twenty years of this century, when small numbers of oil palms were planted in various experimental stations in Selangor, by the Department of Agriculture. Secondly, commencing in 1917, and lasting until 1957, was the phase of plantation development of oil palms. During this period of forty years, some 120,000 acres of oil palms were planted. In 1957, the industry entered a distinct third phase, when the Federal Land Development Authority commenced planting of large areas of oil plams for smallholders. Since then, the pace of oil palm planting has accelerated and both the Federal Land Development Authority and commercial plantations are now engaged in planting large areas of oil palms every year. There are now over 300,000 acres of oil palms in Malaysia (Table 1) and the annual rate of increase is now at least

TABLE 1

Acreage of Oil Palms in Malaysia

Year	*Acreage*
1921	1,900 acreas
1931	57,200 acres
1941	79,700 acres
1951	97,400 acres
1961	140,100 acres
1967	300,000* acres

60,000-80,000 acres, i.e. the annual rate of increase in acreage is equivalent to the total acreage planted in the pre-war period, 1917-1941. It is possible, that by the late 1970's, there will be 750,000-1,000,000 acres of oil palms in Malaysia.

When discussing the prospects of oil palms in a Malaysian context, it is necessary to consider markets, the acreage of suitable land, the facilities for oil processing and evacuation, the supply of labour and capital, and the availability of management, engineering and research staff.

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*The director of the Oil Palm Research Station, Banting, Selangor.

MARKETS FOR OIL PALM PRODUCTS AND THE EFFICIENCY OF THE MALAYSIAN OIL PALM INDUSTRY.

These aspects are considered together in that they are interrelated. The more efficient the industry, the better able it will be to compete in the fats and oils market. It is vital to be efficient, because on the world oils and fats market, there are some thirteen main vegetable oils and oil seeds, two marine oils and three categories of animal fats with which palm oil and kernel oil compete [2].

The future market for palm oil and kernels is considered to be favourable on the following basis:—

1. The rapid increase in world population.

2. The high crop yields of the Malaysian oil palm industry compared with other oil palm areas and with the yields which are obtained from other oil producing crops.

It is necessary to elaborate further. World population in 1800 was about one thousand million. It is now over three times this figure and with an annual increase of 2%, the world population is expected to double in 35 years (Table 2). The world's food problem is the fact that food supplies are increasing less rapidly than in the population. In terms of human need, there is no world surplus of food. The Food and

TABLE 2

World Population Increase and Total Fat Requirement at 25 lbs. Per Head Per Annum

Year	*Population*	*Total fat requirement at 25 lbs./head*	*Actual production*
1800	1,000,000,000	—	—
1956	—	—	24,000,000 tons
1965	3,100,000,000	37,000,000 tons (approx.)	33,000,000 tons
1980	4,000,000,000*	45,000,000 tons* (approx.)	—
2000	6,000,000,000*	75,000,000 tons* (approx.)	—

**Estimates*

Agricultural Organisation of the United Nations estimates that a reasonable minimum consumption of fat per head is 25 lbs. per annum. On this basis, a population of four thousand million which will be reached by around 1980, will require forty five million tons of fat per year. In 1965, total world fat production (as distinct from exports of fats) for both industrial and consumption purposes was about thirty three million tons whereas requirements for consumption were thirty seven million tons. Therefore, there appears to be a large deficit between total minimum fat consumption and total production. So far, discussion has been of total world production requirements. It is perhaps more realistic to examine the export markets.

The total export market for oils and fats increased over the 15 years from 1949-1964 from 4,608,000 to 9,447,000 tons or 4,839,000 tons i.e. the market for exports of

TABLE 3

World Export of Vegetable and Animal Oils and of Oil Palm products

Year	*Total vegetable and animal oils*	*Total palm and palm kernel oils*	*As % of all oils and fats*
1949	4,608,000 tons	835,000 tons	18.1
1964	9,447,000 tons	902,000 tons	9.5

vegetable and animal oils doubled in that time. (Table 3). However, in 1964, palm oil and palm kernel oil, had only 9.5% of the market compared with 18.1% in 1949. Although the oils and fats market has greatly increased, there has been a very considerable decline in the share of the market given to palm oil and palm kernel oil. This is due to greatly reduced production in certain countries, particularly the Congo and Indonesia. In 1949, world production of palm oil and kernels for export was 835,000 tons, whereas by 1964, there had been but a slight increase to 902,000 tons. This is certainly no evidence that palm oil or kernels have swamped the market so far. During the 15 years, 1949-64, the oils and fats market grew by some 300,000 tons per year. If the market continues to expand at the same rate, then the annual requirement for oils and fats will by 1980 be some four million tons more than at present. Given high yields and efficient production, and the fact that oil palm planting is proceeding at a much faster rate in Malaysia than elsewhere, there is reason to expect that an expanding market could absorb the 1,200,000 tons of palm oil and kernels which it has been estimated could be produced annually in Malaysia in 1980 if planting continues at the present rate.

TABLE 4

Exports of palm oil from Malaysia 1936 - 1965

Year	*Tons oil*
1936	19,400
1961	94,200
1965	156,000

The production of palm oil in Malaysia is shown in Table 4. Malaysia has recently become the largest single producer of palm oil in the world.

The oil palm industry in Malaysia is efficient because of the high yields of oil obtained. Yields of 2 tons of oil per acre are now regularly achieved on the better soils in young mature areas planted with modern genetic material. Yields in Indonesia could be comparable, if sufficient fertiliser was available. With adequate fertiliser, yields in Indonesia, could be increased by 50-100%. In West Africa and Central Africa however, very few areas reach 1½ tons of oil per acre. Other oil producing crops such as the coconut, the olive, ground nuts, soya beans, sunflower, etc. have very much lower yields of oil per acre. Even the best areas of coconuts do not yield much more than ½ ton of coconut oil per acre. In Ghana, yields of 1,000 - 1,500 lbs. per acre of soya bean (the main competitor) are obtained. The oil/bean ratio is 20% and therefore production of soya bean oil per acre does not exceed 300 lbs. Even in the U.S.A., where there is a very large and efficient soya bean industry, the yields of soya bean oil are only 600 lbs. per acre. Although many of the oil producing crops are annuals and their cultivation

These aspects are considered together in that they are interrelated. The more efficient the industry, the better able it will be to compete in the fats and oils market. It is vital to be efficient, because on the world oils and fats market, there are some thirteen main vegetable oils and oil seeds, two marine oils and three categories of animal fats with which palm oil and kernel oil compete [2].

The future market for palm oil and kernels is considered to be favourable on the following basis:—

1. The rapid increase in world population.

2. The high crop yields of the Malaysian oil palm industry compared with other oil palm areas and with the yields which are obtained from other oil producing crops.

It is necessary to elaborate further. World population in 1800 was about one thousand million. It is now over three times this figure and with an annual increase of 2%, the world population is expected to double in 35 years (Table 2). The world's food problem is the fact that food supplies are increasing less rapidly than in the population. In terms of human need, there is no world surplus of food. The Food and

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and harvesting either can or could be mechanised, there are advantages in growing a perennial crop, in that annual planting is not necessary and crop is harvested throughout the year. The oil plam industry in Malaysia appears to be in a strong position compared with other areas where either oil palms or oil crops are grown. The main competition experienced by the oil palm is from soya beans, lard and fish oil and in the two latter cases, the oil is a by-product. There is of course considerable competition with synthetics in the traditional fields of soaps and detergents, but several new uses for palm oil have been discovered such as manufacture of fatty acids, additives for numerous eating stuffs, baking and ice-cream.

AVAILABILITY OF SUITABLE LAND IN AREAS WHERE FACILITIES FOR EVACUATION OF OIL PRODUCTS EXIST

For optimum yields of palm oil, a high intensity of sunshine and a well distributed rainfall without long dry spells are required — 80-90 ins, rainfall per year and 6 or more hours of sunshine per day seem ideal. Mean monthly temperatures should be in the range 25-29°C and mean minimum temperatures should not fall below 18°C. There are very few areas in Malaysia where these conditions are not met to a reasonable degree, and where their absence would markedly limit yields. There are very few districts with annual rainfall of less than 70 ins., or with sunshine of less than five hours per day. The approximate average number of sunshine hours in Singapore is $5\frac{1}{2}$ and in Kedah $7\frac{1}{2}$ hours. By contrast, the oil palm areas of Nigeria experience an average of $4\frac{1}{2}$ hours sunshine per day. In Malaysia, there are some areas of high rainfall — the East Coast of Malaya, the Labuk Valley of Sabah and these areas will require careful attention with respect to assisted pollination and control of fruit bunch diseases.

Land of sufficient fertility appears to be plentiful. The Department of Agriculture estimates that there are some eight million acres of jungle which could be suitable for oil palms. Much of this jungle is of lowland Dipterocarp Forest and by world standards is quite rich in timber. Before clearing, merchantable timber should be extracted according to a logging plan which is related to market demand. This procedure is being followed in the case of the Federal Land Development Authority. Apart from those jungle areas, there are some four million acres of rubber land, of which a considerable proportion could be replaced with oil palms without markedly affecting the gross rubber output of Malaysia. The main areas for conversion would be the oldest low yielding fields. Increased crops from the vast areas of high yielding stock which have been planted in recent years should allow maintenance of total rubber production at current levels.

The criteria of a suitable oil palm soil are:

1. 3 ft. of soil without impediment to rooting from gravel, stones etc.
2. The soil should not be too sandy. The texture may vary from sandy loam to heavy clay.
3. Ideally structure should be strong and of friable consistence.
4. The soil should not be acid i.e. pH less than 3.5-4.0 and should not contain minerals in toxic quantities.
5. Slopes of up to 40° are considered plantable, provided that the soil does not easily erode and that it is possible to make wide 12 ft. terraces by bulldozers.
6. Good drainage to 3 ft. is important.

In fact, most of the soil series in Malaysia are now considered suitable for planting oil palms. With the likelihood of rubber prices remaining near to their present level and with the pressing need for diversification, plantation companies are now growing

oil palms on land where no more than 6-7 tons of fresh fruit bunches (f.f.b.) per acre can be expected when palms mature at 6-8 years of age. At one time, potential yields of 9 tons were considered necessary before an area was planted with oil palms rather than rubber. It should be noted, however, that breeding and selection has led to a considerable increase in the oil/bunch ratio and with factory extraction rates of 22% oil/ bunch, dura x pisifera areas yielding 7 tons of f.f.b. per acre will give 1½ tons of oil per acre. This is equivalent to the total yield obtained from Deli dura areas, planted on the best soils and yielding 9 tons bunches per acre at 16-17% oil/bunch.

The major soil series which are unsuitable are (1) Malacca Series, because of the lateritic concretions which form a serious barrier to root growth; (2) other lateritic soils such as the lateritic Durian and Batu Anam Series (non-lateritic Durian and Batu Anam are suitable); (3) deep peat over 5 ft.; (4) acid sulphate clays; (5) the bris soils of the East Coast

In comparison with other tropical countries, Malaysia is well provided with excellent roads, railways, navigable rivers and good harbours and generally, wherever land is suitable there is no great difficulty in establishing communications. Even where rivers are the only means of communication and are quite shallow e.g. a depth of 8-10 ft., it is possible to despatch oil in tanks, transported on barges, to bulking installations, either at ports or at suitable points for transfer of oil to sea-going vessels. Bulking installations should provide facilities for oil reception, storage and loading onto the ships.

During the 1960's, there has been a drastic change in the rate of oil palm development in Malaysia and considerable use is already being made of the good land and facilities which exist. As part of a programme of agricultural diversification, it is now the policy of both the Federal Land Development Authority and most commercial plantation companies to new plant or replant with oil palms, wherever the soil and climate are suitable and facilities for the exportation of oil exist. In Sarawak, two oil palm experiment stations were setup in the early 1960's. A smallholders scheme in Fifth Division and a Commonwealth Development Corporation estate in Fourth Division are expected to be opened up shortly. In Sabah, smallholders' schemes are progressing in the Klias, Sandakan and Tawau areas and harvesting has been in operation for some time on several large estates on the East Coast.

LABOUR

With the exception of Eastern Malaysia, there are no difficulties in recruiting labour. There is no doubt that the problems in Eastern Malaysia will be solved, as population is rapidly increasing in Malaysia and more job opportunities will be required. Malaysia has a long tradition of growing tree crops in plantations and smallholdings and the skills required for growing oil plams can be imparted and learned without difficulty provided that adequate training facilities exist.

THE AVAILABILITY OF CAPITAL

There are four main categories of oil palms organisations in Malaysia. By chronological order of their participation and current investment in the industry these are as follows:-

1. Expatriate and local rubber plantation companies.
2. Federal Land Development Authority and State Schemes.
3. Local plantation companies formed for establishment of oil palm plantations only.
4. Independent smallholders.

Dr. Lim Chong Yah in his book 'Economic Development of Modern Malaya' states that "Four main causes have been responsible for new capital formation in the oil palm sector after the war" [1]. These causes are (1) A high postwar price of palm products compared with pre-war prices and compared with changes in other relevant price levels. (2) Progress in breeding and selection leading to much higher yields. (3) Subsidisation of planting under certain conditions by the Government. (4) Increased competition from synthetic rubber.

It would appear that the momentum for development given by these four main causes will be maintained. Most of the plantation companies, whether expatriate or local, are already deeply involved in oil palms and therefore have long term plans to invest more capital in the oil palm sector. The Federal Land Development Authority has its own long term palns for development and some of these are on a giant scale e.g. Jengka Triangle in Central Pahang. Several local companies recently formed for oil palm development only, are now fully committed to continued development by reason of their investment made so far. As prospects are favourable, development must continue. Therefore, there is every reason to believe that capital will continue to be available for oil palm development.

MANAGEMENT, ENGINEERING AND RESEARCH STAFF

The ultimate success of the oil palm industry will depend on the availability of trained and skilled field and factory management, supported by adequate research. Such personnel are being produced by the University and by Serdang College and there is no doubt that suitable personnel will become available. The largest requirement for personnel will be at the field manager and assistant manager level. The most suitable training ground for such personnel is Serdang College. Post-College training is also necessary and the Federal Land Development Authority has recognised the need for systematic inservice training in oil palm planting techniques, by operating its own training and refresher courses for management staff.

INCREASED EFFICIENCY OF THE INDUSTRY FOLLOWING IMPROVEMENT OF MANAGEMENT AND RESEARCH TECHNIQUES

The prospects in the oil palm industry appear even better, when it is realised that the efficiency of the industry could be greatly increased. There are three main directions in which efficiency could improve. Firstly, by better application of established oil palm technology. There is a very considerable gap between the performance of the best and the worst oil palm estates, largely because of a current shortage of experienced oil palm managers and of advisory officers. This is in marked contrast to the rubber industry where ample personnel of this type exists. However, in 5-10 years time, this situation should be radically altered.

Secondly, by better application of the principles of farm business management. Although there are several exceptions, generally, insufficient attention is paid to these principles. This is not to imply that estate managers do not run their estates conscientiously nor well; but, in the evaluation of estate results there is insufficient analysis of the various estate operations. Too much attention is paid to the final profit figures and too little to the several components of these figures and to the productivity of labour in terms of man/days rather than dollars.

Thirdly, by improved Agricultural Science. As in other crops, Agricultural Science in the oil palm holds vast potential for the future. The sphere of research where the greatest possibility of improvement lies is probably plant breeding. Plant breeding is highly economical, compared with agronomy or pest and disaese control, for example, where application of treatments may be expensive. The benefits obtained from using improved varieties can usually be gained fairly cheaply, in that high yielding varieties may not require very muc ɥmore expensive field treatment compared with lower yielding

varieties. There is a need in Malaysia for large, comprehensive oil palm breeding programmes. In North America and North Europe, success in plant breeding has gone to the big organisations and institutes with large resources, and it is likely that this pattern will be repeated here.

Plant breeders are now making efforts to increase the genetic variability of their breeding material, by exchange of material with other countries. Trials have been laid down to determine the heritability of different characters and the results of these trials will allow further breeding and selection on a much more precise basis than in the past. The scope for improvement by breeding is very promising and it is not over far fetched to suggest a possible yield of palm oil of 4-5 tons per acre after a further 3-4 generations of breeding and selection.

In the field of agronomy and nutrition, plantation practice is tending to run ahead of research knowledge. Research in the oil palm is obviously a long term procedure. The industry has not always been able to await the results of research and the consequence is, that a number of techniques are in use, which although apparently rational in concept, have not yet been fully proved from either agronomic or economic points of view. Examples are cover crop and maintenance practices, castration, assisted pollination and to a lesser extent, fertiliser application and the diagnosis of fertiliser requirements.

Assuming that the industry makes a determined attack on its many problems, considerable increases in yield can be expected. There is a need for further agronomic experimentation in the new environments where oil palms have not previously been planted e.g. Central and South Pahang, the East Coast of Malaya, Sarawak and Sabah. The outcome of such experimentation must be improved yields.

The nutrition and physiology of the oil palm are very large subjects for research and at the moment our knowledge is relatively meagre. Too much emphasis has been placed on the role of leaf analysis and the fact that mineral nutrition is but one of the many factors influencing palm yield is often overlooked. Research into nutrition will, like genetics, bring major advances in yield and there is a need for far more work in this field than is going on at the moment. However, the problems have been defined and research plans made and some useful early work has been done.

The problems of intercropping and intergrating of animal husbandry with oil palm growing will require much more than the cursory treatment they have received so far.

There has been very little recent research into processing or palm oil technology and this undoubtedly will be a fruitful field for research in the future.

To conclude, the industry is rapidly moving into a phase of increasing opportunity in the managerial and technical fields. Improved efficiency, following the application of the results of expanded research programmes and the existence of favourable markets should maintain the oil palm industry in a progressive and healthy state.

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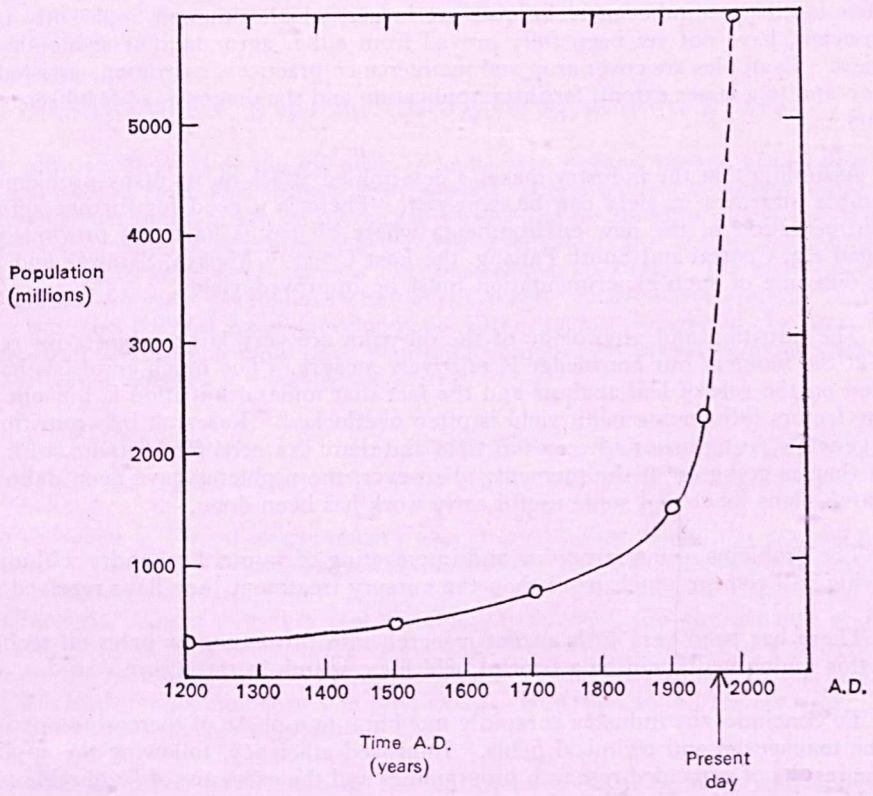
MAN'S CHOICE — PEACE OR DISASTER?

TEN or fifteen years from now, hundreds and hundreds of millions of human beings may die unnecessarily, die whilst still in their youth.

Man has been on this earth for about half a million years. If civilisation is defined as the point at which Man began to domesticate animals and plant his own seeds, where previously he had been a hunter of wild beasts and a gatherer of wild fruits, then civilised Man has been on this earth for still thousands of years. At the dawn of civilisation there were few people, and through migration they became sparsely scattered over the globe. In 1900 there were 1500 million people. This is not remarkable — this increase has occurred over thousands of years. But the staggering fact is that by 1950 there were 2500 million, an increase of 1000 million people in only fifty years. These sobering figures are represented in the graph below.



Extrapolating the graph, it may be seen that if this trend continues unchecked, the population will reach 5000 million by the end of this century, in other words the population will have *doubled* itself within a few decades only.

Why?

Why has the population increased with such alarming rapidity since 1900?

What are the factors which have contributed to this "population explosion?"

First or all let it be stated that it is *not* because people are having more children than they used to — the overall birthrate has remained approximately static. The dramatic growth of population has been caused almost entirely by rising levels of prosperity and

advances in medical science, with the consequent decrease in the death rate. It is ironic that doctors solve one problem by curing people of pain and disease, and simultaneously create another by keeping more people alive for a longer period of time. Thus it is the decrease in the death-rate which has led to this unprecedented state of affairs. To quote the United Nations Report, The Future Growth of World Population (1958), "With the present rate of increase, it can be calculated that in 600 years the number of human beings on earth will be such that there will be only one square metre for each person to live on. It goes without saying that this can never take place, something will happen to prevent it."

But what?

Will it be famine on a scale so vast as to be inconceivable, where hundreds of millions of people die of starvation? Will it be a world war where nation fights nations for food instead of territory? Or will it be a peaceful state of co-existence where birth and death-rates are balanced to maintain a steady population?

The choice is ours. We can turn a blind eye to graphs and statistics, and continue our classical mode of existence, in which case by the turn of the century we shall have degenerated into nothing better than animals vying with one another for survival. Or, we can use the knowledge we have gained in order to mould our own future into a happier form. There are two aspects of this latter alternative.

The first is that there must be drastic improvements in agricultural production in order to provide more food for the increasing number of mouths. To quote a specific example, widespread adoption of double cropping of padi in Malaysia is of the utmost importance, since if the old practices are continued, there will be an acute rice shortage within ten or twelve years. From a purely technical point of view it is a simple matter to improve farming methods, but from the socio-cultural aspect it is a long slow struggle as the peasant farmer is notoriously resistant to change. Nevertheless persistence is essential, since only by becoming self-sufficient in staple foods will the developing countries be able to survive when the west runs out of surplus grain. India and Pakistan are undoubtedly the nearest to disaster, but unless great strides are made, Malaysia too will succumb in the near future.

The best possibility for a *rapid* increase in agricultural production lies in the use of fertiliser — an FAO report states that "there can be no manner of doubt that when farmers in developing countries use fertilisers, even without other improved farming methods (which may be harder to instigate), the results will be good. The results from 9500 trials in fourteen countries showed that the overall average increase in crop yield was 74%." In fact it has been stated by experts that if Asia (excluding China and Japan) is not using 20 million tons of fertiliser by 1980, then widespread famine is almost certain to ensue.

Thus agriculture is indeed "the mother of all industries and the maintainer of all human life." Nevertheless, even per ected agricultural techniques cannot cope i. there is too *much* life. Improved agriculture could conceivably take care of the expected increases in population for twenty-five years or so (perhaps helped by farming the oceans as well as the land), but beyond that it would be impossible. Many people maintain that increased agricultural production alone will solve the food problem. But one example will suffice to refute this possibility — a giant fertiliser plant is at the moment being built in northern India; it will provide 450,000 tons of urea per annum, yet the benefits it will bring by increasing food production (by two million tons of grain per year) will be completely negated in two short years by the increasee in population. In other words it will stave off the famine, but it can only delay its arrival, and cannot alone prevent it. Yields cannot be increased indenfinitely, and besides we should eventually be competing for space to live in as well as food. And the world's vast cities are encroaching upon potentially valuable agricultural land.

So what of the future?

Some people delude themselves with the mistaken belief that by 1980 we shall be housing our surplus population on other planets. This is clearly a vain hope unfounded

on reality. Consider the situation. Our own natural satellite Moon is a dead barren world with no atomosphere, and the planets are even more inhospitable — Mercury is minute and so near the sun that we should be instantly burned, Venus is covered with white fog and has oceans of oil, Mars is the nearest planet, but even so a journey to Mars at 25,000 miles per hour would take nearly a year to complete, and preliminary spectroscopic observations reveal that there is little water, no oxygen, and a night time temperature of -140° F. The outer planets are vast and so immensely distant that the sun's heat is inadequate even to permit liquid water — everything is eternally frozen at sub-zero temperatures. But in any case, even if small teams of scientists do reach the nearest of these neighbouring worlds, as they surely will one day, it is still a complete impracticality to think of transporting hundreds of millions of people there.

This brings us to the second aspect of the solution to the problem. The *only* answer *in the long run* is to control the size of our population. In the light of the above facts, this is indisputable. Family planning must go hand in hand with increased agricultural production. Again, however, birth control involves a basic social and cultural change, and therefore rapid results are not possible. But the fact remains — Man can choose to have four children, with the probability of *their* future offspring leading a happy existence, or he can choose to have fourteen, with the possibility of succeeding generations leading poverty-stricken lives, or even dying miserably early deaths. The logical, ethical and humanitarian choice is surely evident, and in the final analysis it is the only hope.

Thus the solution to the problem is twofold, first we must accelerate food production by better agriculture, and second we must impose limits on the size of our population. The latter is of long-term significance — it is crucial, and it is the ultimate solution. The former, agricultural development, is of *immediate* importance, to tide us over the next decade until population limitation is established. Never before has the agriculturalist had such a vital role to play as during the next ten years — at this time it is the farmer, not the businessman, who holds the destiny of Mankind in his hands.

To summarise, I quote the economist, Dr. Raymond Ewell.

"The food/population problem seems likely to reach such enormous proportions by 1975 that it will dwarf and overshadow most of the problems and anxieties which now occupy our attention, such as the threat of nuclear war, Communism, racial problems unemployment, the space race, Berlin, Vietnam and the like. These current problems will fade into the background as the enormity of the food/population problem impresses itself on the world. It is the greatest and most nearly insoluble problem in the history of Man. And it is almost here."

Thomas Malthus' far-sighted prediction of 1798 is coming true. It is coming fast, and there is not much time.

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ANNA SNOWDON
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SERDANG: 10th February, 1968.

CHALLENGES OF THE COLLEGE FOR EXTENSION WORK IN MALAYSIA

by

L. L. PESSON

EXTENSION work in agriculture and home economics is a vital accelerator for agricultural and rural development in Malaysia. At the present time, Malaysia is a deficit food producing area, meaning that a substantial amount of food eaten by Malaysia's people must be imported. The Government is vitally concerned with increasing production and diversifying agriculture, taking positive steps to insure that these things are done. The falling price of rubber has accentuated this problem since the country must also look for alternative means of earning foreign exchange so that the economy can continue to grow.

The question arises, therefore, as to how extension work fits into the picture of development in Malaysia. The answer is simple and straightforward. Extension workers of all types and descriptions, whether they work for the Department of Agriculture, RRIM, FLDA, etc., must focus their efforts on the change of the farmer and his family. The farmer must be educated in such a manner that he will grow new crops, use improved planting materials, and apply proper husbandary techniques. The farm family must grow their own food supply, eat balanced diets so that they will be healthier and more productive, educate their children, and learn to coopearate with their fellow villagers so that group effort ("gotong royong") can supplement their own individual efforts in achieving higher and more efficient levels of output. In the operation of the farm and the home, as well as cooperative-type village activities, economic efficiency, and the utilization of land and mechanized equipment to ensure increased production and efficiency, must be attained so that higher levels of income and a better life can be enjoyed by all.

These, consequently are some generalized functions of extension work, signifying some very noble purposes. What are the challenges offered for the achievement of these purposes by the people of Malaysia? There are at least two challenges to the extension worker. First and foremost, the extension worker must be well-trained. He must not only **know technology** well, but he must also be skilled in the process of **applying knowledge** to the real-life, practical problems of helping farm families improve themselves, and he must also be competent in **teaching people effectively** so that the obstacles and resistances to change can be overcome. Secondly, the extension worker must be **dedicated** and **devoted** to the important responsibility of getting agricultural and rural development moving through the increased productivity and efficiency of the farm family. Without dedication and devotion to this extremely critical and important task by competant extension workers, agriculture in Malaysia will not progress; it will not move forward. The key to progress is changed farm families, and an important and vital accelerator of this change is the extension worker. Truly, the extension worker has the privilege and the responsibility for the performance of one of Malaysia's, and the world's as well, most urgent functions, the provision of food and fiber to meet mankind's needs.

How does the College of Agriculture here at Serdang fit into this picture? And, more specifically, how do you fit into it? Again, the answer is very simple and straightforward. The College exists primarily to produce well-trained professionals who can lead sound action — oriented extension programs. All other purposes of the College are subsidiary to this one. It is the responsibility of the College to produce competent agriculturists who know their subject-matter, can think constructively about the practical problems of the farmer, and who know how to plan, conduct and evaluate effective and efficient extension programs that help the farmer become more productive and more

efficient and one that will help the farm family live better. The College, however, can not do it all. It requires a joint effort; the College and the student must both exert effort if these purposes are to be achieved. This implies that the student, consequently, has certain responsibilities not only to himself, but to his fellow human beings and to his Country.

First and foremost, the student owes it to himself to develop his capabilities to the fullest. This means that the student should devote his full energies and capabilities to his studies, to his field-work responsibilities, and to learning how to live and work cooperatively with his fellow students. He must learn how to be a leader; how to influence and persuade others to follow his guidance toward desirable human goals. The basic ingredient of leadership is knowledge, for the student will be expected to lead and educate people through the power of ideas. Unless he leads and dedicates through sound and proven ideas, his influence upon the agricultural community will be futile. Thus, if the student develops his capabilities to the fullest, he will be ready to take his place as a leader of men and women whether it be in a government position where he can fulfill the expectations for which the College and the nation accepted him as a student.

To be more specific, let's think about some of the student's responsibilities. Most probarly, you can add others yourself to the ensuing list. These are submitted primarily as a means of stimulating your thinking. Some responsibilities of the student are as follows::—

1. To study continously so that the power of the mind can be developed to its fullest potential.

2. To learn to think constructively about what is learned, especially to question and to apply knowledge to problems.

3. To recreate periodically so that the mind and body can be refreshed; so that learning can be continued with renewed vigor.

4. To use practicals, field work, and assignments as exercises in the application of knowledge. They are like the air being injected into a ballon. Each little puff enlarges the balloon; thus each opportunity in the exercise of the mind and body expands further the capability of the individual. It is hard to see, but it does happen.

5. To take an active part in student affairs. This is an opportunity for leadership development. But remember, a good leader is also a good follower.

6. To react to progress at the College with an open, questioning mind. Respond to change as you would expect the farmer to react.

7. To use the library, particularly the new one that will be developed, as a storehouse for knowledge; a place where the mind can be stimulated; where new ideas can be found and/or conceived. All the College can offer you is a basis for continued learning. The rest is up to you. The person who, in five years, teaches to others only what he learned as a student at the College will be obsolete.

8. To learn to empathize; to put yourself in the other fellow's place. How would you react if you were in his place? Through increased understanding of others, it is possible to overcome more easily reactions that are negative.

9. To learn to communicate properly with others through written and oral means. The success of any extension-type work depends to a large extent on communications ability.

10. To learn to identify problems and to apply the knowledge learned in the solution of problems. To learn to distinguish from among the problems the ones that will contribute most to agricultural development and to the betterment of the individual farm families.

11. To learn to be considerate of the other fellow's opinion. To learn how to be forceful, but yet be kind, gentle and helpful.

In summary, the College has a mission to perform; the training of each of you to the best of its ability. Each of you, in turn, has the responsibility to make the most of yourslf, to develop yourself to the fullest extent, so that you can take a leading role in agricultural development in Malaysia. Finally, all of us, staff and students have to work together to make the College of Agriculture, Malaya, the best institution of its kind anywhere. For only through the production of well-trained diplomates can extension work in Malaysia Progress.

Serdang, 9th January, 1968.

THROUGH THIS LIFE

Mortal wanderer, in the land of many happenings,
Stop awhile and take this welcome,
The cool of your hand and the throbbing of your blood cells,
Jolts me to a thousand awakenings.

There leaps a flame in your soul,
There lies promises in your eyes,
Your brows are clear,
Yet to be lined with a thousand achievements

Ah, youthful travellers,
You have yet.....

To see the world in its bloody misery
burning in its own hell,
To feel the brush of evil, and smile as it smiles
(though well you know that this must not be)

So depart now — there is your path.....
Your palms are empty
Your belonging but a purse of hopes,
Trip lightly,
And kiss a few crowns for me.

NORAZIAH NADZRI
Tahun Satu.

THE PEAT AND ITS UTILISATION

In broad term, peat consists of recognisable plant remains. It has a loss of ignition exceeding 65% . Texturally, peat is made up essentially of organic matter and is soapy or slippery to feel. It is formed when decomposition of plant materials is inhibited by the presence of excessive moisture, due to poor natural drainage. The water is normally black in situ but is clear and tea coloured when held against the light. The nature of peat depends on the type of vegetation from which it was derived and the environmental conditions in which it was accumulated. Malayan peat soil was developed under a forest cover and invariably remain water-logged up to the surface almost throughout the year.

Peat is characterised by its high organic matter content, acid reaction, high water holding capacity and its light weight. It has a high exchange capacity to absorb and to hold base ions such as calcium and potassium. The Pineapple Research Station at Pekan Nanas, Johore, had analysed a number of samples of South Malayan peat and obtained the following results:

Soil Reaction

The pH varies from 3.2 to 4.9 with 68% of the samples reading less than pH 4.1.

Soil Moisture

With good drainage, the average moisture content varies with depth, from 74% at surface layer to 88% at 18". The high water holding capacity is probably due to the high exchange capacity of the peat.

Organic Matter Content

The top layer contains 86.87% while the top soil of North American mineral soil contains only 4% and North American peat contains 80%.

C/N Ratio

The top layer of peat soil has an average C/N ratio of 26:1, compared to 19:1 of North American peat.

The South Malayan peat is also low in potassium, phosphorus and calcium when compared with North American peat and mineral soil. The average content of exchangeable potassium is 0.349 m.e./100 gm. or 68.1 lb./acre. The average magnesium content varies from 2.6 m.e. /100 gm. at surface to 1.4 m.e./100 gm. at 18" deep.

The total exchange capacity increases with depth, ranging from 134 m.e./100 gm. at surface to 147 m.e./100 gm. at 18" deep. This is probably due to the increasing amount of organic matter at the lower layer.

The total acreage of peat soil in Malaya has been estimated to be about 2 million acres and most of this occurs in large swamps on the coastal plains along the west and the east coasts. The soil is usually associated with limited crop suitability and pineapple is at the present moment the only crop that can be economically cultivated on the deep peat.

Successful utilization depends on strict water control and advanced techniques of peat soil management. In U.S.A., the peat soil which has been satisfactory drained properly limed and fertilized, gives excellent yields of many crops such as potatoes and, sugar cane. Some 15,000 acres of peat soil in Florida are intensively cultivated to produce sugar cane and vegetable crops. In most reclaimed areas, peat generally is deficient in major nutrients and in minor elements especially calcium and molydebnum.

Besides its use as an agricultural soil, peat has other uses, too. Under the right condition of a slow rate of decomposition in combination with pressures in the earth, peat is changed into lignite and then to anthracite. In Europe, it is used as a fuel — by burning considerable quantity of it — for heating the house. In Russia, the ash from burnt peat is used as a fertilizer and is said to contain 22.6 to 70.6% of $CaCO_3$ and 2.6 to 5.1% of $MgCO_3$.

References-

1. Soil Survey Manual for Malayan Conditions — ML. Leamy & W.P. Panton.
2. An Introduction to Soil and Plant Growth — Roy L. Donahue.
3. Forest Soils — Harold J. Lutz & Robert F. Chandler.
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KEH CHAI HENG
2nd Year.

TOWARDS A BETTER UNDERSTANDING OF THE MEANING OF EXTENSION

(DEPARTMENTAL CONFERENCE 1966)

EXTENSION has received varied interpretations; in content and context, depending upon who defines it and when it is defined. For the sake of uniformity it is best to contend with currently accepted views.

Extension Education can be viewed in these ways: first, as an academic discipline (extension education), second, as a process (extension education), third as a programme of work (Extension work). As an academic discipline, extension education is defined as an applied science consisting of content derived from research, accumulated field experience.

As a process, extension is concerned with the dissemination of ideas in the form of Technology to rural people and the promotion of action that leads to their adoption for improved agriculture. It is the process of teaching rural people how to live better by learning ways to improve their farm, home and community institution. It helps people to gain new knowledge, develop skills necessary to apply them to their problems. The extension process can be applied to any programme for rural development.

As a programme of work, it is an art school system of education concerned mainly with the teaching of adults and youths. The fundamental objectives is the development of people. In this sense the term extension refers to all those educational programmes carried out by government, semi-government and voluntary agencies in real life situation, directed at improving the welfare of rural people.

The programe need not be confined to agriculture. In fact they could be health, veterinary, fisheries cooperative development etc. so long as they are concerned with the teaching of rural adults and youths some kind of Technology aimed at promoting t heir welfare.

DISTINGUISHING CHARACTERISTICS OF EXTENSION.

1. The extension process is one of working with people, not for them; of helping people to become self-relied, not dependent on others; of making people the central actors in the drama; not the stage hands or spectators. In short, helping people, by means of education, put useful knowledge to work for them.

The goal of extension teaching is not only to teach facts, ideas and practices, but to get these facts, ideas understood, accepted and replies. Thus extension is concerned with the basic assignment:

1. The dissemination of useful and practical information relating to agriculture and home situations. (home economics).
2. The practical applications of such knowledge to farm and home situations.

EMPHASIS ON THE EDUCATIONAL ASPECT.

Helping people help themselves lies at the core of extension. This means (1) changing peoples behaviour, (2) their attitudes, (3) modes of thinking (4) ways of doing things. Changing people's behavior requires education, since education is the process of bringing about changes in human behavior, changes in what people know, in what they think, in what they can do and in what they actually do.

Those activities which are part of extension work should be viewed as an educational means of bringing about these desirable changes. Changes in behaviour brought about by eduacation are more lasting and promising than those brought about by other means.

Strictly speaking, anything that is not educational cannot be subsumed under the term extension. The dispersing of fertilisers, planting materials to farmers and the loan of tractors are not extension in the true sense, because they are not educational but service in nature. On the other hand the teaching of rural people how to establish and maintain fruit trees, fertilize their padi, how to construct fish ponds.... and how to care for their babies — constitute extension work because these attitudes involve 'teaching' . Teaching is one phase in the educational process, the other is learning; hence the term teacher-learner process.

Extension is a process of changing the behavior of people so that they will understand, accept and apply them for improving their level of living. The central motivating force is education. Hence extension is educational.

AIMS AND OBJECTIVES OF EXTENSION.

The primary aim of extension is to influence people to make desirable changes in their behaviors that will contribute to better family and community living.

The objective of extension is to influence people so that they, through their own initiative and efforts, can identify their problems and find solutions to these problems.

Professor J. Paul Leagan states that the aim of extension is to develop finer families, living in better homes.... on more productive land and in progressive communities.

The central objective is to help people but useful knowledge to work for them. In other words, to help people improve their level of living by means of aided self-help through education. The central task is the development of people, being achievable only through educational process. The objective is not restricted to any particular communities, cultures, regions but has universal validity, especially in developing countries.

GUIDING PRINCIPLES OF EXTENSION

Extension workers have to understand certain guiding principles of extension if they are to carry out their duties as follows:

1. Extension is aimed at adults primarily. Adults tend to change slowly.
2. Extension must begin where people are and with what they have and gradually works up to what they ought to be.
3. Extension success depends on voluntary participation of adults and youths.
4. Extension is an educational process. Desirable changes to be made in people must be attained by educational means and not by force or fraud.
5. Extension programmes must be based on 'felt' needs and workers must effectively help people meet these needs.
6. Extension encourages group thinking, group discussion, group planning and group action through local organization and local leadership.
7. Extension helps people to think through problems for themselves and arrive at desirable solutions.
8. Extension emphasizes working with people and not for them.
9. Extension workers must not impose their ideas upon people, but must influence their attitudes, modes of thinking and ways of doing things by way of education.
10. Extension encourages the fact that rural people possess the capacity of developing themselves and shaping their future as well as environment. Rural people may by illiterate but they are not stupid.

11. Extension teaching must deal with ideas that have immediate application to rural people and not some information to be stowed away in their minds.

12. Learning is a gradual process. Learners must be exposed to ideas over a period of time to induce them to act.

13. Theory and practice must be related. Principles and theory related to WHY; Techniques related to HOW..... The effective extension worker is neither an abstract thinker nor an accomplished user of tricks; he is both.

Contributed by:
AZAMI OMAR
Tahun Dua.

Kemendore Land Development Scheme

My sincere thanks to the manager of the Kemendore L.D.S. Mr. J. Ibrahim Axford, who has contributed & co-operated in the writing of the article.

NOTE: Figures given in the article are approximate figures.

The scheme is situated in the Jasin District of Melaka, about 4½ miles from Jasin town. The scheme was commenced in 1958 under the auspices of the now defunct Jasin Land Development Co-operation and was taken over by the Federal Land Development in 1961.

The scheme consists of 4237 acres and has 2 villages within its perimeter, namely Kg. Kemendore and Kg. Ayer Kangkong. Agriculturally the scheme is divided into 4 phases (phase I & II in Kemendore and phase III & IV in Ayer Kangkong).

The main communication between both villages is road which has a partially tarred surface; this surface is being lengthened year by year. Total road length between both villages is 3 miles.

Usually in any FLDA scheme, the work starts with the perimeter survey, followed by swamp survey and river survey. Having the perimeter boundary marked, underbrushing and felling of the jungle starts. Usually the underbrushing and felling is done block by block (of convenient acreage). This is to ensure that the work is done properly and can be checked by the staff more efficiently. Having got all the blocks felled, the area is left about 40-60 days before it can be burned. Burning depends on weather; sometimes it may takes 3 months before it can be burned if the weather is wet. If the area is not completely burned, restacking and reburning is necessary, before any further work can be carried out. Jeep tracks are then constructed so that all work done in the scheme can be checked by the V.M. and the Manager easily. (Note: All work is being carried out by contract workers and not by the settlers during this period). The settlers will only come in and stay when the rubber trees have been successfully bud-grafted. After constructing the jeep tracks, lining and terracing will start followed by planting and establishing of cover crops. The next is holing and planting of seedlings. Once the area has been planted, maintenance work starts until the seedlings are bud-grafted (in the case of rubber).

There are a lot of problems encountered in the initial stage of the scheme especially when the area is under contract, the main problem is to ensure that the contractor does his work properly, thus the Authority has to have an officer i/c who is dynamic and experience, so that some of the more unscrupulous contractors can be properly supervised. The area when handed over should be free from lalang and at least 99% of the trees in the area should be successfully bud-grafted and do not accept the area if not otherwise. If the area is accepted not up to standard, then it leads to the difficulty of handling it later on when the lands are looked after by the settlers.

In the initial stage of development (i.e. when the settlers have already settled in the scheme) never divide the agricultural area into individual lots, but only into blocks about 300 acres in size. This allows the staffs to establish the settlers as a controlled labour force with morning muster and clarifying proper detailing of tasks.

Necessity to treat the settlers as an integral part of FLDA because without the co-operation of the settlers the agricultural areas will not be properly developed or maintained. Settlers are told about the FLDA policies, agriculture policies, i.e. stand per acre, manuring programme, girth measurement, pruning, opening a phase for tapping etc. The Ketua blocks who are settlers must be appointed or elected so that some sort of liasion is available. Representatives of settlers must acceptable to the Manager. Leaderhip, not always chosen from the best speaker or the bravest speaker, he may turn out to be nothing more than a trouble maker.

Problems in the scheme arise not only from the settlers but also from the staffs. It is essential that the Field Staffs should have a sound basic agricultural knowledge, tolerable, good leaders, dynamic and prepared to co-operate with settlers who are normally their inferiors as far as technical knowledge is concerned. On the other hand Field Staffs must be firm with settlers bearing in mind they should not adopt a superior attitude. Senior Field Staffs must be prepared to report inefficient Junior Field Staffs as we cannot carry a lazy and inefficient member of Field Staffs. Co-operation between Field Staffs is essential especially in exchanging of ideas etc. etc.

Field Staffs must take a reasonable interest in the building up of a community spirit in the village. Most settlers are uneducated and adopt the 'Berdaerah' and 'Berkampong' spirit and do not consider the scheme as their village. Field Staffs must also be aware of settlers personal problems e.g. schooling, medical facilities, food and others. How can Field Staffs help the settlers? The answer to this question is by encouraging settlers to take active part in the minor projects in the scheme such as establishing fish ponds, vegetable growing, padi cultivation and animal rearing so that settlers can supplement their income and at the same time this will encourage self pride in the settlers if these minor projects are successful e.g. the settlers in Ayer Kangkong are proud of their fish ponds because the project has been very successful. Because of this there are many other fish ponds now emerging throughout the scheme without any financial aids from the Authority.

In short, Field Staffs including the Manager and his assistant must take an active interest in the fact that the settlers are being properly treated and instructed in the field.

The Settler.

It is the settler who is the biggest problem in the scheme, whether he is consciously or unconsciously creating problems. Let us look at a typical settler's background :

(a) Generally uneducated but literate.

(b) A married man with a family and therefore with a family problem.

(c) Has been uprooted (through his own choice) from his home village and dumped into a strange village full of strangers.

(d) He is generally a suspicious character, probably all his life, part of his livelihood, he has made on his own wits, and therefore he is always on the defensive.

(e) Probably for the first time he will, as a settler, experience a disciplined form of life.

(f) A settler will be :

(i) hardworking.

(ii) hardworking but slow.

(iii) a waster.

(iv) a trouble maker (hardworking or otherwise).

Thus this settler is the first instance of arrival rather bewildered but staffs must not loose sight of the fact that he is a human being. A little extra work by the Manager and his staffs to ensure that settlers settle in easily will pay off in the long run. Remember it not a sign of weakness to be sympathetic and give help, in fact it is a noble action on the part of the doer, by doing so the Manager and his staffs will gain the settlers' confidence and the settlers will not treat the Manager and his staffs as the "enemy". Only then the Manager will have his finger on the pulse of the scheme; and will know what is going on in the scheme.

In the field the normal settlers' problems are :

(a) Absenteeism

(b) Idleness

(c) Going back too early

The Manager should lecture to settlers after they have settled in telling them that he will not tolerate the forgoing and why?

BE PREPARED TO DEAL WITH SETTLERS FIRMLY AND FAIRLY EVEN IF THE DECISION YOU HAVE TO MAKE IS NOT A NICE ONE OR MAY AFFECT A SETTLER'S PERIOD OF OCCUPATION IN EXPECTATION OF TITLE.

Details structure of Kemendore LDS.

	Kg. Kemendore	Kg. Ayer Kangkong
No. of settlers	272	108
No. of staffs		

Population	1578	693
School	National Type Primary School (Malay & Chinese)	No — Pupils are send to Kg. Kemendore or Selandar
Medical	A clinic with resident H.A. & visited by Govt. M.O. once a week	No — But covered by Kg. Kemendore medical staff
Bus service	MARA	MARA
Taxi	Yes	Yes
Provision shop	Yes	Yes
JKR water	Yes	Yes
Mosque	Yes	Yes
Police	Yes	No
Sidang	Yes	Yes
Women inst.	Yes	Yes
Adult education	Yes	Yes

Details structure of the agricultural areas are as follows.

Phase one

Rubber	—	600 acres divided into 100 lots
Clones	—	RRIM 501, 513, PR 107
Date planted	—	1958
Date budded	—	December 1959
Date tapped	—	1st July, 1965
Fruit areas	—	200 acres divided into 100 lots
Type	—	Rambutans

Phase two

Rubber	—	864 acres divided into 108 lots
Clones	—	GT 1, PR 107, RRIM 605, 513
Date planted	—	1960
Date budded	—	February 1962
Date tapped	—	1st October 1966
Fruit	—	200 acres divided into 108 lots
Type	—	Rambutans
Date planted	—	1960

Phase three & four

Rubber	—	1376 acres divided into 172 lots
Clones	—	RRIM 513, 605, 623, PR 107, GT 1
Date planted	—	1960
Date budded	—	May 1962
Date tapped	—	1st October 1967

Distribution of settlers.

Phase	*Malays*	*Chinese*
One	50%	50%
Two	58	50
Three & Four	128	44
Total	236	144

Fruit areas.

In Kemendore LDS only settlers in phase one and two have their fruit areas (2 acres per settler) besides having $\frac{1}{4}$ of an acre of house lot. The areas have been planted with rambutan trees; all are now under production. It has been found that the fruit trees in Kemendore are not very successful because settlers neglect maintainance work in the area. Furthermore settlers do not have the confidence in planting fruit trees because they were depressed by the low price in rambutans in the local markets and also the fact that the old saying "Buah2an ia-lah hasil untok orang Raya." To encourage and to give them more confidence, rubber trees were grown in the form of "Hedge" planting as an intercrop within the rambutan trees. Most of the rubber trees have now been bud-grafted and successfully maintained.

In addition to the main rubber crop, settlers are cultivating swamps for vegetables without seeking any financial aids from the Authority. This "awakening" is a good sign and has only occurred during the last six months. The reason was obvious due to the declination in the price of local vegetables. For same reasons settlers are now cultivating the swamps and turning them into padi fields without asking for financial aids. It would therefore appear from the foregoing that if "necessity" is the driving force, settlers can work just as hard as anyone else.

RAHIM M.S.
F.L.D.A. Scholar

The visit of Vice-President U.S.A. Hubert Humphrey to the College of Agriculture, Serdang.

Seen in the picture Sulaiman Daud, the Secretary General CASU, Mrs. Rashdan, Che Rashid, Mrs. Reveira and Miss Kok Moh Leng.

An Invitation to tour Serdang in Pictures

"I'am going out to fetch the little calf
That's standing by the mother. It's so young
It totters when she licks it with her tongue.
I sha'n't be gone long. — You come too."

— ROBERT FROST

Our campus is over 300 acres and will be tripling her size in the near future. 14 miles south of the Federal capital, our farm — our campus — sprawls like Rip Van Winkle over a lovely countryside called Serdang. Here the land is blessed by the Serdang sun, soothed by the Serdang showers, carressed by the Serdang winds and cradled by the Serdang soil.

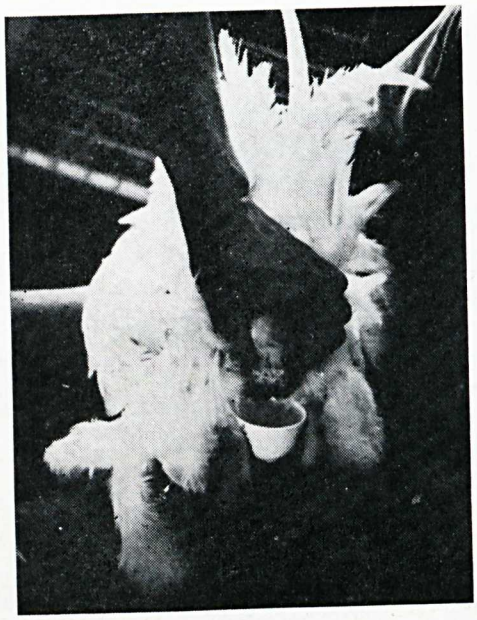
We were born as the "attap school" — the School of Agriculture — in Lake Gardens, Kuala Lumpur. That was in 1927. 1931 saw us settled in Serdang. 1952 — we graduated as the College of Agriculture. Thence Serdang is in constant labour — producing agriculture diplomats year after year.

Warm welcome is extended to those who visit us or come to join us. We are a multi-racial population living together as close friends in our spacious and luxurious hostels. United under one strong Student's Union, we have learn to share our joys and sorrows. Though our homes are scattered all over the states of Malaysia, including Sabah and Sarawak, we have made Serdang a "home away from home". We take it our duty to hold a 3 week long welcoming ceremony — the Re-orientation — at the beginning of each academic year in an effort to help the new comers, the freshies, to settle down and adjust themselves to the Serdang way of life — our way of life. Our Students' Union keeps a very watchful motherly eye over our welfare. She provides the sports facilities for the evening relaxation. And in the Common Room she places the T.V., radio-gram, newspapers, carrom boards, chess boards and etc for entertainment of all.

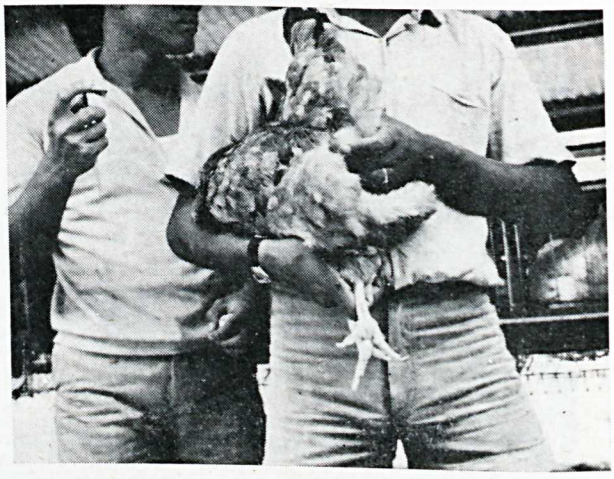
We all have earnestly come to learn, and the College has responded sincerely by providing a vast store house of knowledge. Our stay here is short — only 3 years. And most of our time are spent, away from the lecture rooms and laboratories, working in the fields. And when we leave, as others before us have shown, we are agriculturists tempered by hard practical work, we are young men and women, loyal citizens of a young country, eagerly looking forward to make our contribution to society and a success of our career.

Artificial Insemination

The technique of A.I. on birds is to collect the semen from the male and inject it with a syringe into the oviduct of the female. The birds is held by the legs with the left leg crossed over the right one. The back is stroked several times rapidly starting behind the wings and moving towards the tail. This is continued until the tail is seen to heel forward towards the head. The tail is then pushed back and the copulatory organ is made to protrude and the semen is 'milked' into a container.



In the case of the female, it is stimulated by gentle strokes over the back with the right hand. The female will evert the oviduct opening.



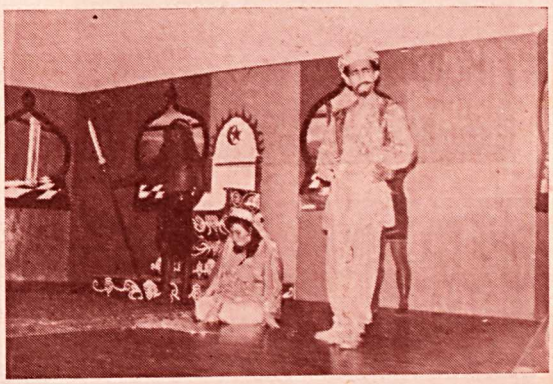
The diluted semen is then injected into the oviduct by means of syringe which when removed is twisted slightly to prevent flow back of semen.

In the case of the bull, the semen is collected by means of artificial penis when the bull starts to mount a cow.

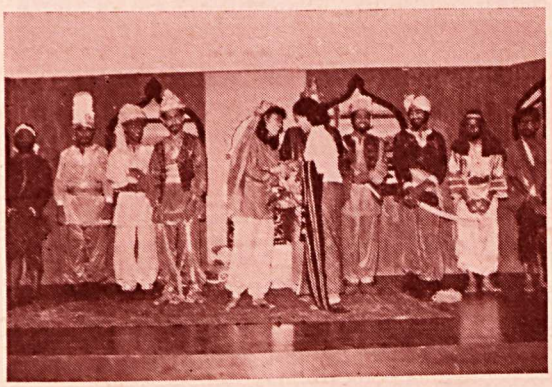
The Staging of Rafi and Parwani

Parwani cried but to no avail for Rafi to free her from the bondage of love.

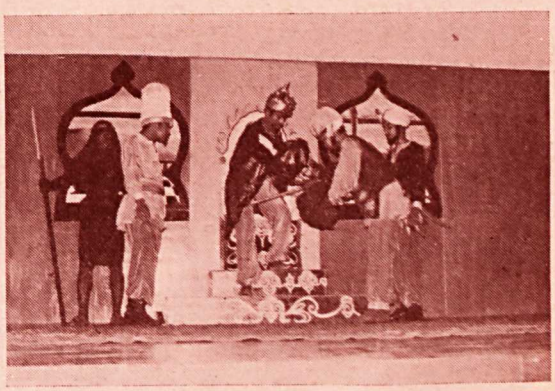
The Sultan prefers that Parwani should be his wife.



But Rafi prefers death.

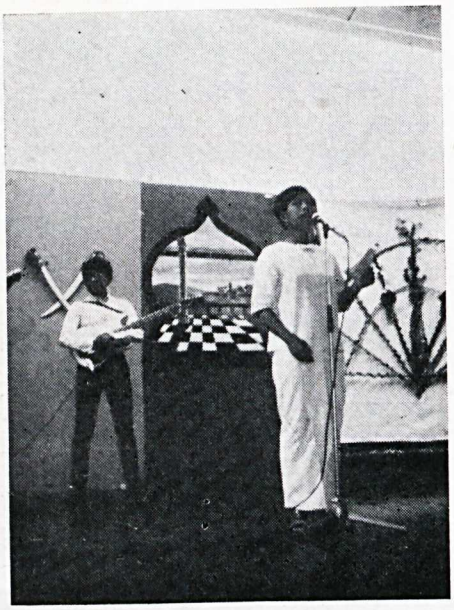


Everything ends well. Rashidah received a boquet from Mrs. Rashdan.



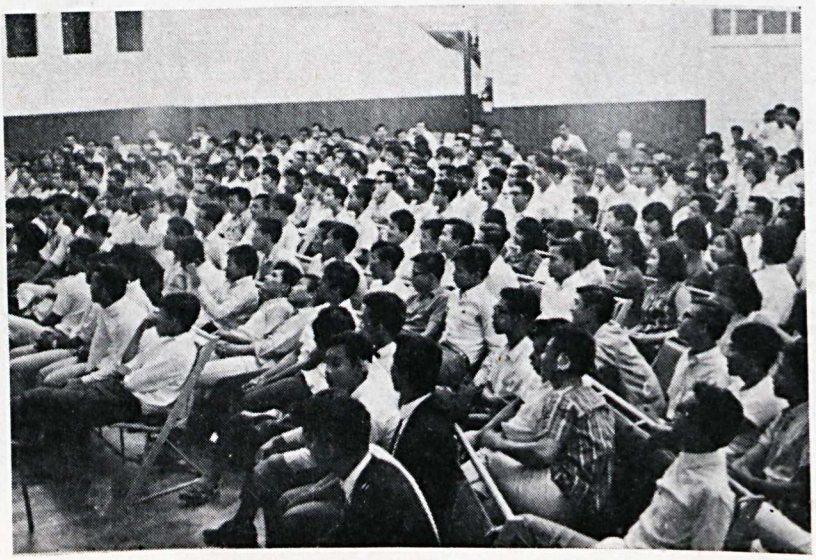
It's Talentime

The cooing voice caused much sighing and heart throbbing among admirers.

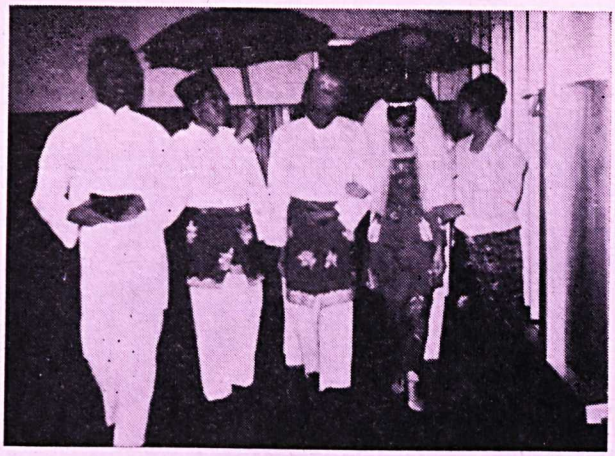


He deserved the prize, said the President.

Mr. Chew Ken Kun at his best.



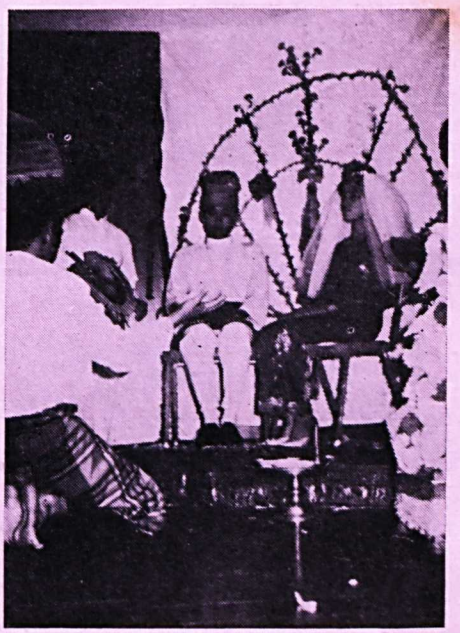
The College Hall was packed by admiring listeners.



Light she was like a fairy, with the groom following behind. The traditional Malay Wedding was presented by students from Negri Sembilan.

There was a hushed silence as they ascended the stage.

The groom has to get the consent of the parent. The 'Akad Nikah' ceremony takes place.

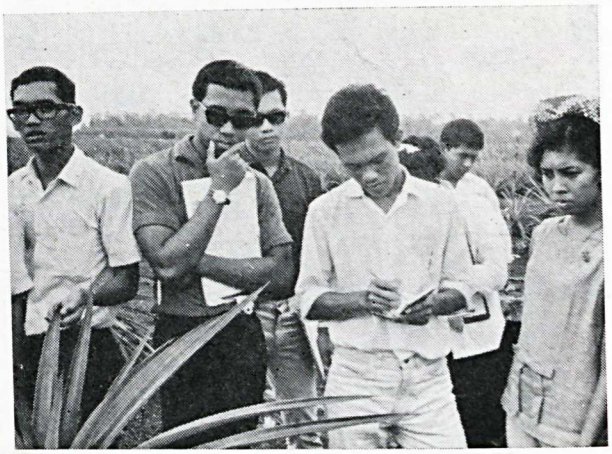


Before that there was the 'Tarian Inang being performed.

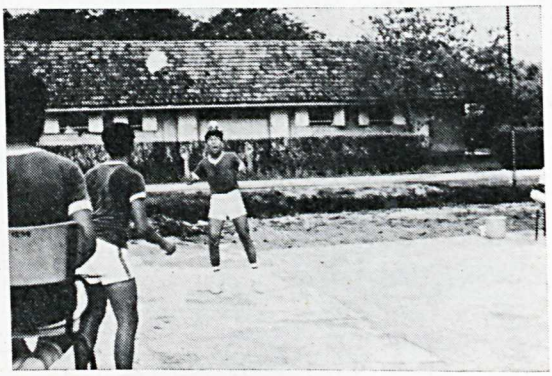
Miss Anna Snowdon is seen sprinkling the 'ayer mawar' on the bride and bridegroom.

Participation in Union Activities

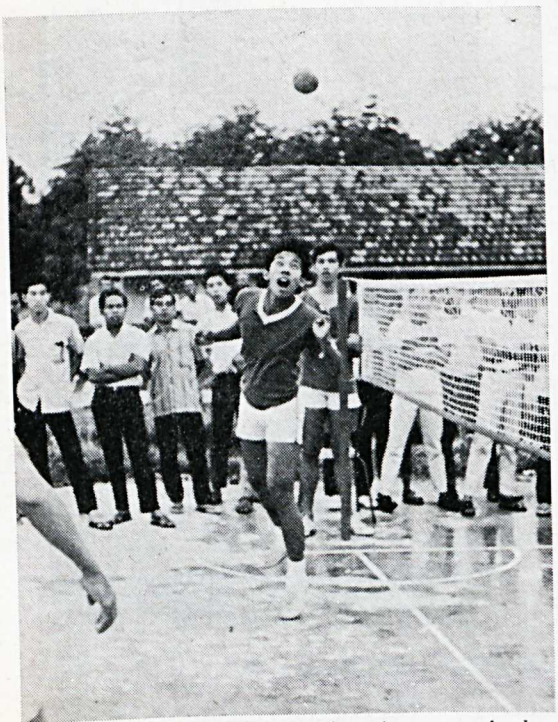
Three of our College dancers posed for our photographer after their during the 'Malam Ba'asa'.



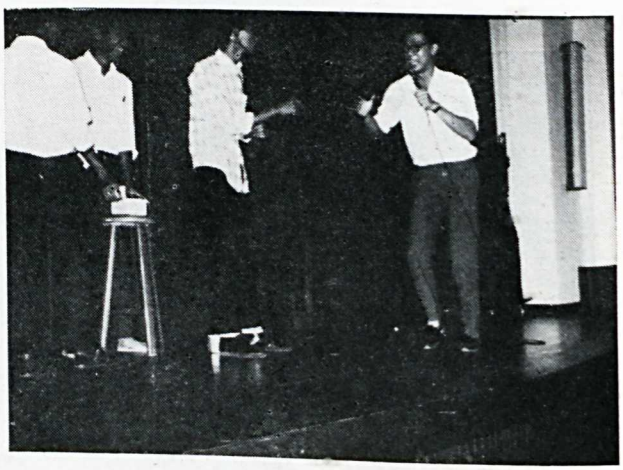
Mere staring at the plant won't solve any problem. Study it closely.



The look of utter consternation at the sight of the ball.....



A CASUan caught in action in one of the games, during the Games Carnival.

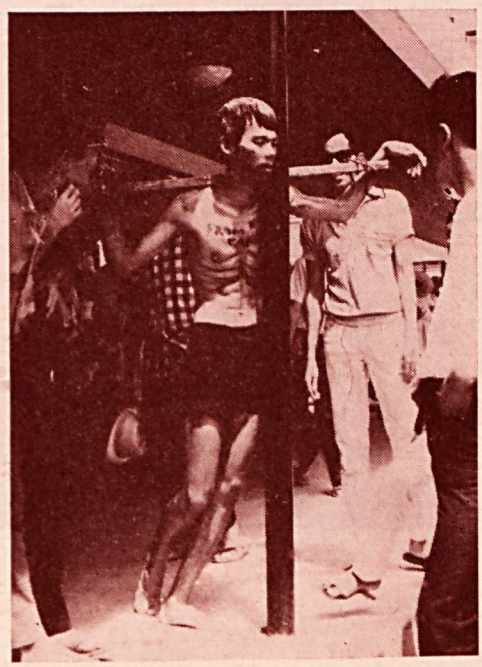


A member of the staff participated in the Union activities.

Memorable Serdang Life

The day the Freshie made a tour of the Serdang Campus, they find that they really enjoy the fun. Everybody was in enjoyable mood for something was going to happen after this.

The parade was only meant to get a peek at the choice.



This is the man who created a story in the Campus. He escaped the Nazi Concentration Camp because he was frustrated!

Memorable Serdang Life

He is the pick of the choice. Nobody could beat him at his exceptional abilities. Yet because of this he suffers inferiority complex.

No sleep, no rest,
No study, no test,
No write the better
Three weeks, no letter.

Alas! harsh words were gone
For Orientation is no more on
Shy she was in the beginning
Becoming bolder upon growing.

Majlis Pelajar2 Ke-21

PERSATUAN PELAJAR2 KOLEJ PERTANIAN, MALAYA

ANNUAL REPORT

Fellow Causuans

The 21st Council takes great pleasure in presenting to you the Annual Report of the Union for the period 22nd December 1966 to 29th December 1967.

Administration:

As per constitution, the Principal, Dr. Mohd Rashdan bin Baba was the Hon. Adviser to the Union.

Students' Council:

The following were elected to the 21st. Council:-

President	:	Inche S. Sivarajah
Vice President	:	Inche Chin Tan Leong
Secretary General	:	Inche Sulaiman Daud
Asst. Secretary General	:	Inche James Woodworth
Finance Secretary	:	Inche Peh Thean Tiek
Welfare Secretary	:	Inche Rosli Madani
Sports Secretary	:	Inche Poh Syee Wah
Social & Cultural Sec.	:	Inche Sepuan Anu
Publication Secretary	:	Inche Abu Bakar Adam.

The representative from the Muslim Union who sat in the Council was Inche Ahmad bin Hassan.

Membership

Already in its 21st Year since its inception, Casu's membership to date has swelled to 439 — including 42 girls, one honorary member and one life member Inche Luke Tan Ah Kow. The membership almost doubled the previous year of 266 and the membership has been the biggest to be recorded in Casu's long history.

Meetings

The First Annual General Meeting was held on Friday 30th July 1967. The 20th President of the Union, Inche Habibur Rahman Ibrahim was accepted in the meeting.

The Students' Council held 9 ordinary meetings and 15 extra-ordinary meetings. Ordinary members were accepted in meetings every new and then to acquaint them with the mechanics of student government and also to ensure continuity in the leadership.

PROGRAMME OF ACTIVITIES

Council's Policy — In his presidential address the President outlined the following policies:-

1. Organising the PKPM Games Carnival and implement a vigorous sporting Programme.
2. To promote greater publicity.
3. To explore means of improving tne overall standard of food.
4. A greater social and cultural programmes.
5. To explore ways and means of implementing the usage of the National language.

External Relations

The Secretariat has undertaken to publicise the Union and the College during the long Vacation. Ordinary members have sealed various schools and public organisations in the country to enlighten them further on the activities of the union and the College.

Sometime during the year representatives from the Himpunan Mahasiswa Islam Indonesia, KAMI and Students from Hongkong were received among other student leaders.

Late in the 2nd term, touring Thai Students were familiarized with campus when they paid a visit to Serdang.

Casu and the National Union of Malaysian Students

Apart from close contacts Casu had with the National Union, Casu participated in the following PKPM projects and activities.

1. 9th Annual Conference.
2. 5th Malaysian Students Games Carnival.
3. Work Camp.
4. PKPM open Championships.
5. Half-yearly NSC.

The following represented CASU at the 9th Annual Conference held at UMSU from 17th till 19th March 67:

1. Inche Sulaiman Daud (leader)
2. Inche S. Chandrasothy
3. Inche Tan Kwang How
4. Inche Pheh Thean Tek
5. Inche Poh Syee Wha
6. Inche James Woodworth

Observer: Inche Abu Bakar Adam.

At the conference, Inche Chandrasoothy, Inche Tan Kwang How and Inche Sulaiman Daud were elected as Vice-President, Press Secretary and Conference Secretary respectively.

Casu was again the host to the 5th Malaysian Students Games Carnival. Highlight of the Games Carnival was the dance. CASU improved tremendously this year in reaching four finals but were not able to win any event. CASU also participated in PKPM Open Championship.

Eighty Casuans participated in a PKPM Work Camp. The following members represented CASU to the Half Yearly Conference held at the Tech. College.

1. Inche Roslie Madani (leader)
2. Inche James Woodworth
3. Inche Abu Bakar Adam
4. Inche Arikiah
5. Inche Allan Chan Chew Kong
6. Inche Zulkifli Samsuddin.

Observer: Che Siti Hajar, Inche Adam Amin.

Staff Student Relationship

Good relations were maintained with the staff and great mutual understanding were cultivated. The traditional staff-welcoming dinner was organised to welcome the new staff members with the objective of perpetuating the existing cordiality between the staff and students. It is however hoped that in the future, with a bigger staff membership, greater participation from both the students and staff will prevail for the betterment of all.

Our deepest appreciation to the Principal and all members of staff whose understanding and cooperation have sactioned all our activities.

Secretariat

This year was a hectic but successful one for the secretariat, publicity campaign was the first project undertaken in the long vacation.

A member was sent to participate in the ISC-PKPM Leadership Training Seminar held at the University of Malaya. Two other members also represented CASU and MARA. As an initial project only fifteen students took part.

The following accessories were made available for sale to members:-

1. Envelopes
2. Writing pads
3. Travelling bags
4. Foolscape papers
5. Collar pins
6. Files
7. Christmas Cards and New Year Cards.

Further, a tailor was also made available to be present every Monday night.

Fifty of our students (final Year) also attended the First Malaysian Oil Palm Conference from 16th to 18th Nov. 67. at the Dewan Bahasa dan Pustaka. CASU also participated in the debate for the Mrs. Kok Wee Kiat trophy. Though we never survived the first round against MARA our speakers should be duly congratulated for their excellent performances.

Publications

With the cooperation and determination of its members, the Publications Committee has made marked strides this year. 'Berita Serdang' — the monthly campus newsletter has been a much sought publication from members.

At the time of writing this report, the 'Tembusu' and the 'Serdang Sun' were in the process of printing and the Council was assurred of a much greater outlook in those two magazines.

Apart from these usual projects, the Committee set another precedent by having College Exercise books printed.

Language and Literary

In support of the National Language and to instill appreciation of Malaysian Cultures a 'Malam Bahasa' was organised. The programmes successfully carried out included debates, oratorical contests, cultural dances and recitation of 'Sajak and Pantun'. Later in the third term, the Inter-year debate was also organised. The debates stimulated a much greater understanding of sex and politics among College Students.

National Language Classes were held for enthusiastic members.

Welfare

With the two-fold increase in membership (all residential) the problems of catering food to meet members' tastes posed a much bigger problem. In an effort to improve the menu, new dishes were introduced. However a serious setback has hindered the Committee as only a few members offered and pragmatic solutions to the food problems faced.

As has been in the past, free anti-tetanus injections and dental treatments were provided to members. These included contributions to the Harry Kydds Fund, National Disaster Relief Fund and Old Men's Home, Cheras. Blood Donors of the Union tremendously donated blood.

From the 28th October to 11th November 1967, members participated in work camps at Sekolah Laki2 Sungei Besi at Weekends.

Sports

With the accession of a larger number of new members to the Union, there was greater and keener participation in sports, resulting in an overall improvement in every games. With the enthusiasm CASU has triumphed in reaching four finals at the PKPM Games Carnival staged by Casu.

Though the sports programme was a tight and ambitious one this year, with dedication, much of the sports activities have implemented to great success. Numerous

games were played both friendly as well as league. Mention must be of rugby, which under the guidance of Mr. Dan Ellison has continued to bring fame to Serdang.

The Open Championship and the Inter-Year Competitions have discovered hidden talents at home. We sincerely hope that members continue to dedicate their zeal and enthusiasm to the union so as to sanction to the betterment and the dynamism of the Union.

Finance

This year with the help of Ad-Hoc Committee the Union has seen some good accounting. The Union has also managed to set aside a large sum of money for the incoming 22nd Students Council.

Affiliate — CAMSU (College of Agriculture Muslim Students Union)

For our affiliate CAMSU, the year one of achievements. Among their projects and activities undertaken were:-

1. Koran Reading Competition
2. Religious Talks.
3. Work Camp at Tanjong Karang — in conjunction with CASU
4. Talks to Secondary Schools.
5. Inter-college Debate
6. Malam Kebudayaan.

RETROSPECT AND PROSPECT

CASU undergoing a period of rapid expansion is indeed proud of her past leaders and members who had rendered their services to making CASU what she is today — a dynamice Union. However like any otner organisations the main setback to the furtner development of the Union is the proportionate increase of apathy as the membership increases. However, I maintain that there will be enough members with zeal and enthusiasm to work for the betterment of CASU.

Acknowledgements

1. To the Adviser for his keen interest and understanding.
2. To Inche Ahmad Rashid for his assistance rendered to the Union.
3. To all members who have contributed in one way or another to make this year successful one.
4. To all other members of College Staff for their cooperation and help.
5. To the College Council for their generous subsidy.

SPORTS COMMITTEE 1965/66.

Chairman	:	Chin Tan Leong
Secretary	:	Poh Syee Wha
Captains	:	1. Rugby: Abdullah Jusoh
		2. Soccer: Lim Khooi Teng
		3. Hockey: Christopher Hew
		4. Lawn Tennis: Tham Yong Choi
		5. Table Tennis: Chen Fai Kok
		6. Badminton: Rahim Sail
		7. Volley Ball: Liu Sin
		8. Basketball: Lee Lau Tak
		9. Athletics: Lau Chen Chee
		10. Netball: Nancy Kwan
		11. Indoor Games: Yahaya Zain
		12. Bodybuilding: Mohd Abbas
		13. Sepak Raga: Mohd. Said.

The 1966/67 session has been a successful one as regards sport activities. CASU was again the host of the 5th Malaysian Student Games Carnival which was successfully carried out (15-17 September). The success was due to the great effort put in by the Organising Committee, the Captains, the members and last but not the least the support given to us by the Principal, the Farm Director and the Staff of the College.

We have, the first time in the history of the Union entered four finals in the Games Carnival namely, Lawn Tennis, Badminton, Netball and Table Tennis. We were the semi-finalist at Basketball, Hockey, Sepak Raga, Volleyball and Rugger 7-aside.

We again win the Martins' Trophy against UMAS, University of Malaya Agricultural Society. This was our third successive victory.

In the Inter College Sports Competition, we were the finalist in Rugby, Lawn Tennis and Hockey. But unfortunately we were unable to play these games due to unforeseen circumstances. Otherwise I have my confidence that we will be the Champs in at least two of the games. We were unable to take part in ICSC's Athletics because we were having our vacation then.

Apart from that we also took part in the Sepak Raga Competition organised by the Technical Teachers Training College Muslim Student Union. We were the good loosers in the second round.

We also took part in the PKPM Open Championships. Here again we made our exit in the early rounds except Lawn Tennis where we only lost to the veterans of the game, the Varsity Students.

RUGBY:

In the Rugby we fielded two sides in the Selangor Rugby Union Yearly Competition (SRU). We had a very fresh team, a team consisting of players who had not the slightest knowledge of Rugby before and a team in the Senior League. The purpose of having a junior team is to prepare them to meet the demands of the game in the Senior League next year and years to come. As in the previous years, the players played an enthusiastic, understanding and determined game. At the time of writing, we were fourth in the Senior League and unfortunately lost in the Junior League. Thanks go to our coach D.M. Ellison who despite of his injury and the responsibilities of work on his shoulders came forward again to coach the team.

The following represented Selangor State and Selangor Under 23:

1. Chong Kai Yong — Selangor and Selangor Under 23.
   position — Second row forward and wing forward respectively.
2. Lau Chen Chee — Selangor under 23 — wing.
3. S. Kugarajah — Selangor under 23 — Second row forward.
4. Chong Wei Cheong — Selangor under 23 — reserve.

The Union members congratulation to them. Thanks also go to Mr. Tan See Yeok and Mr. Martin Banks who played for the team.

Soccer Result:

In the field of soccer, we made tremendous progress. Our team were definitely better than last years and credit go to the Captain, Lim Khooi Teng, Enche Hamid, our coach and the players. They all showed the fire and determination that the game demanded.

Hockey result:

Hockey was not so successful this year. This was due to the interest of students in the other fieldgames. It is hoped that this will not be so in years to come.This year we manage to field a ladies Hockey team in the College. This was due to the interest shown by the ladies members. Although two games were played, I have the confidence that they can improve. In the first game, the players played against the UMAU team and lost 0-5. In the second game, also against the UMAU team, we lost 0-3.

Thanks go to the Captain, Enche Hamid, Miss Kok for coaching the lady team and the players (both gentlemen and ladies).

Lawn Tennis Result:

In this game we did very well. It is very popular and let us hope that the authorities would meet the demand of popularity by coming forward with the construction of at least one more court next year.

Badminton:

Judging by the amount of shuttlecocks used, the game has attracted enthusiastic players this year. Is it because of the victory in the Thomas Cup Final?

Table Tennis:

Table Tennis is another popular game and it is a game where vast improvement was noticed.

Volley Ball:

This year the authority had kindly constructed two Volley Ball courts. As a result, the players were able to practice with more enthusiasm. Thanks to the authorities.

Basketball:

Thanks to the new Basketball court, our Basketball players have really, really improved. Though we lost in the Games Carnival, we beat the Champs in a later game.

Netball:

With the increase in the student population as regard the fairer sex, the netball team was very formidable. We lost by one point against the Specialists (STTI) in the game during the 5th MSGC. It was a very good performance indeed!.

Sepak Raga:

As in Volley ball, we again thank the authority for having constructed two Sepak Raga court. Let us hope the popularity of the game will increase next year.

Indoor Games and Bodybuilding:

As before these games were past time activities. These activities attract a very good proportion of the student population. Chess and carrom were played for the first time in the Martins' Trophy.

Athletics:

Athletics as usual is not popular in the College. This may be due to the poor facilities. However, the bigwalk and cross-country attracted quite a lot of competition.

ERRATA II (Photographs)

P. 97, SOCCER — Standing, one name missing — Mohd. Ismail b. Karim (2nd from left).
— Squatting, one name missing — Liew Kooi (4th from left).

P. 98, RUGGER A TEAM — Standing, one name missing — Ng Siew Seng (last from left).
Squatting, "Yeoh Keat Choon" should be "Chang Fook Nam".
RUGGER B TEAM — "Chan Cow Kong" (X), should be "Chan Chow Kong".
Squatting, 3 names missing — Nawi (2nd from left), Teoh Kim Yong (5th from left), Shamsuddin (6th from left).

P. 99, HOCKEY — Standing, one name missing — Nik Mohd. bin Nik Abd. Majid (2nd from left).

P. 100, NETBALL — Squatting, "Mary Wong" (X), should be "Mary Ong".

P. 100, BASKETBALL — Standing, "Wong Kiew Chye" (X), should be "Lim Chow Shium".

P. 101, SEPAK RAGA JARING — Squatting, after Sahar there should be ",".
VOLLEYBALL — Squatting, 2 names missing — Nik Mohd. b. Nik Abd. Majid (2nd from left) and Liu Sin (3rd from left).

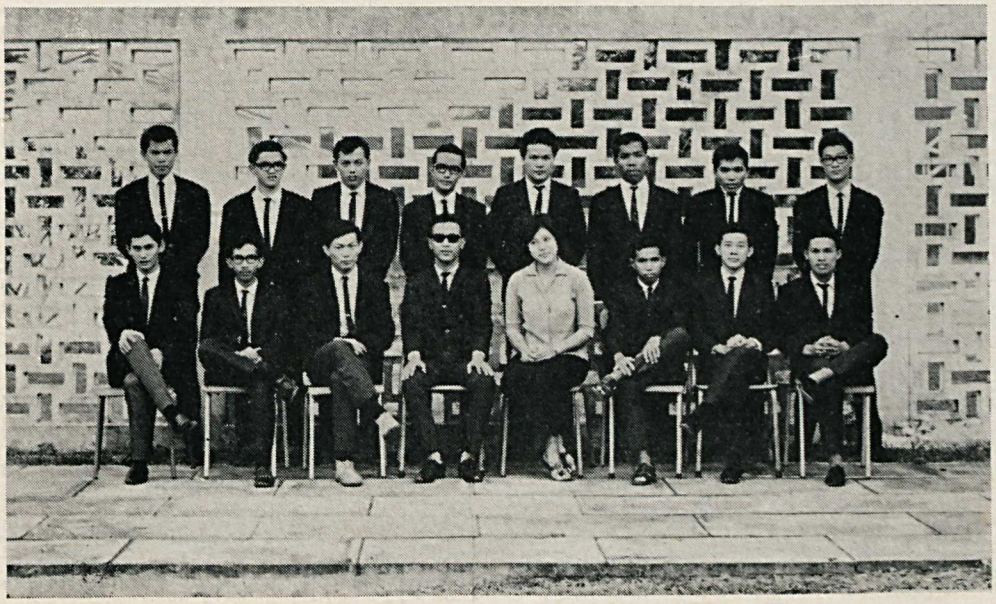
P. 102, TABLE TENNIS — 2 names missing — Tan Cheng Han (4th from left) and Soh See Hong (6th from left).

P. 104, BUDDHIST SOCIETY — "Yap Chin Yau" (X), should be "Yap Siew Chin".

P. 109, THE CATHOLIC SOCIETY — Standing, 1 name missing — Stephen Kutai (4th from left).

Nicholson.

Sports Committee



Standing (L to R): Mohd. Abbas, Tham Yong Choi, Lee Lou Tak, Zulkifli Shamsuddin, Liu Sin, Rahim Sail, Abdullah Jusoh, Lim Khooi Teng.

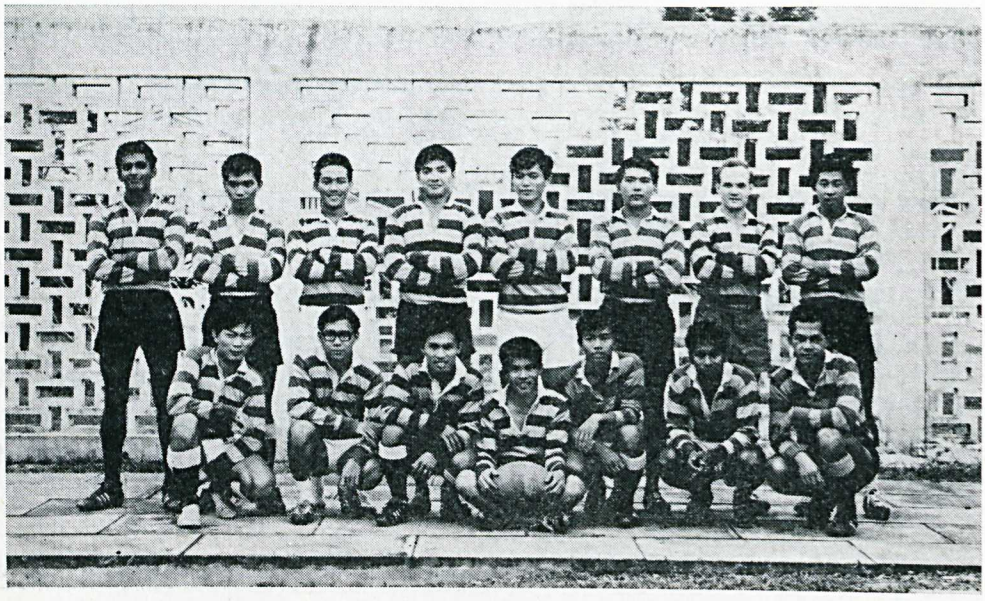
Sitting (L to R): Christopher Hew, Yahaya Zain, Poh Syee Wha, Chin Tan Leong, Nancy Kwan, Mohd. Said, Chen Fai Kok, Lau Chen Chee.

Soccer

Standing (L to R): Lim Khooi Teng, Sonny Gheh, Mohd. Sepun Anu, Francis Kassim, Mohd. Mahmud, Mohd. Said.

Squating (L to R): Christopher Hew, Michael Banta, Edmund Masudal, Francis Nicholson.

Rugger A Team



Standing (L to R): Kugarajah, Abdullah Jusoh, Chong Wei Cheong, Yoong Ching Pin, Lim Hua Son, Foong Mun Chiew, Martin Banks.

Sitting (L to R): Poh Syee Wha, Leong Tat Thin, Lau Chen Chee, Yeoh Keat Choon, Azizan Mustafa, Alias Omar, Kamaruddin Hj. Ali.

Rugger B Team

Standing (L to R): Kugarajah, Yeoh Keat Choon, Chan Cow Kong, Ismail Mahat, Azman Abdul, Say Ken Jee, Abdullah Jusoh.

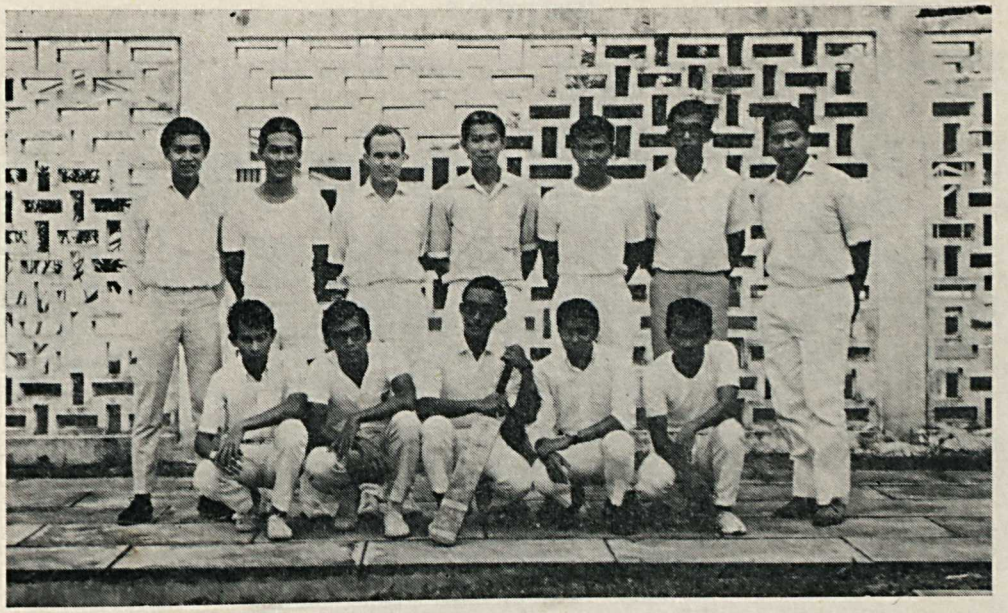
Squating (L to R): M. Bakri, Mazlan Duaji, Chew Fook Seong, Seng Kim Huat, Silahudin Jarjis.

Hockey

Standing (L to R): Poh Syee Wha, Ismail Mahadi, David Koh, Sulaiman Daud, Goh An Te, Zulkifly Shamsuddin.

Squating (L to R): Yahaya Md. Zain, Mahmood Don Jaafar, Kamaruddin Hj. Ali, Christopher Hew, Mokhtar Ismail.

Cricket



Standing (L to R): Tay Kim Chuan, Chong Wei Cheong, Martin Banks, Goh An Te, Abdullah Jusoh, Syed Munir, Heah Cheng San.

Squating (L to R): Zulkifly, Husin Salleh, Zulkifly Shamsudin, Nik Mohd. Arif Nik Sulaiman, Huam Liang Chew.

Netball

Standing (L to R): Nancy Kwan, Salmah Ishak, Hamidah, Nerain Rejab, Loh Siew Ching.

Squating (L to R): Norkhasiah, Leong Ah Moi, Tan Mui Heng, Mary Wong.

Basketball

Standing (L to R): Ng Tien Teik, Khoo Khoon Long, Chin Tan Leong, Wong Kwan Yew, Wong Kiew Chye, Mathias Wong, Tan Suei.

Squating (L to R): Lee Lau Tack, Chan Ah Kiow, Chen Fai Kok, Chin Khi Fui, Wong See Pin.

Sepak Raga Jaring

Standing (L to R): Mohammad Bakar, Azimi Hamzah, Aziz Zakaria, Omar Ismail, Silahudin Jarjis, Ghazali Zakaria.

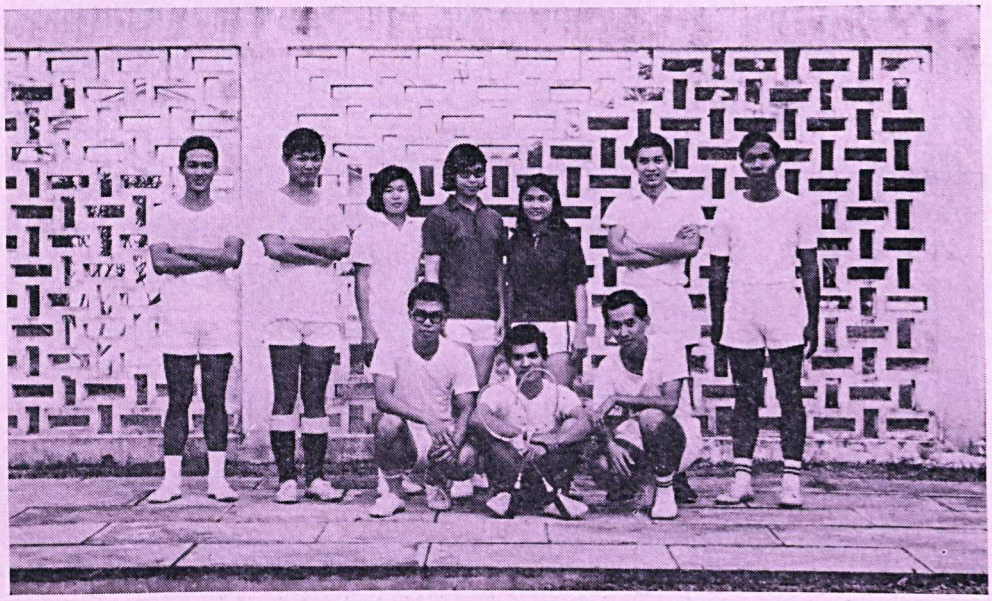
Squating (L to R): Yusof Hussein, Mohd. Ismail, Sahar Mohd. Said, Talib Bachik.

Volleyball

Standing (L to R): Aziz Zakaria, Yusof, Wong Kwan Yew, Yoong Chin Ping.

Squating (L to R): Wong Kiang Liam, Lim Ser Ling.

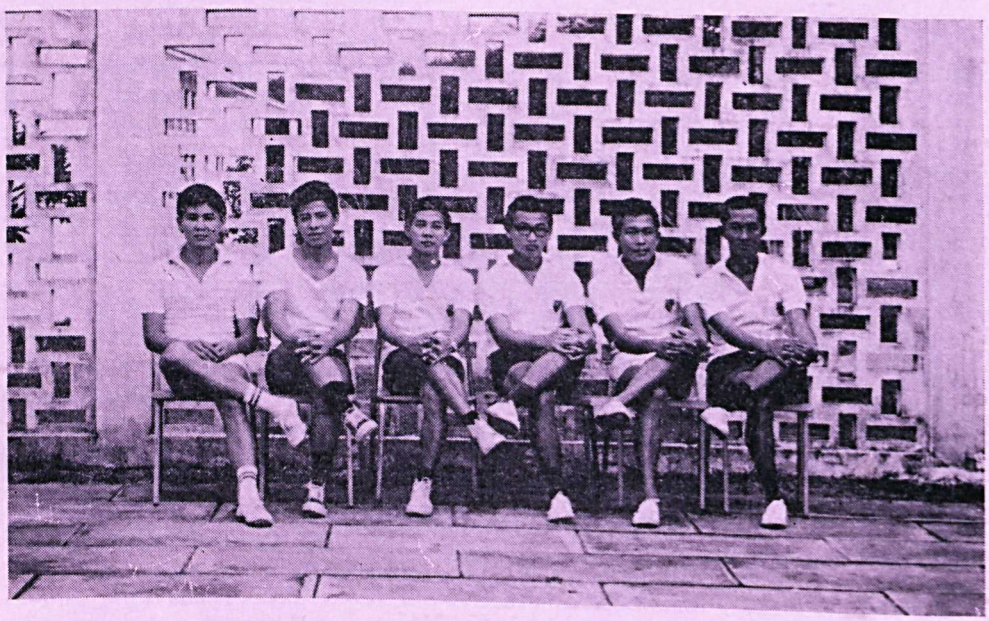
Badminton



Standing (L to R): Chong Wei Cheong, Poh Syee Wha, Annie Kong, Mary Ong, Leong Ah Moi, Tay Kim Chuan, Rahim Sail.

Squating (L to R): Tan Miang Huang, Vincent Woon, Yeong Nam Hin.

Table Tennis



From L to R: Mathias Wong, Fah Ah Ngau, Chen Fai Kok, Chan Ah Kiow.

BUDDHIST SOCIETY C.A.M.

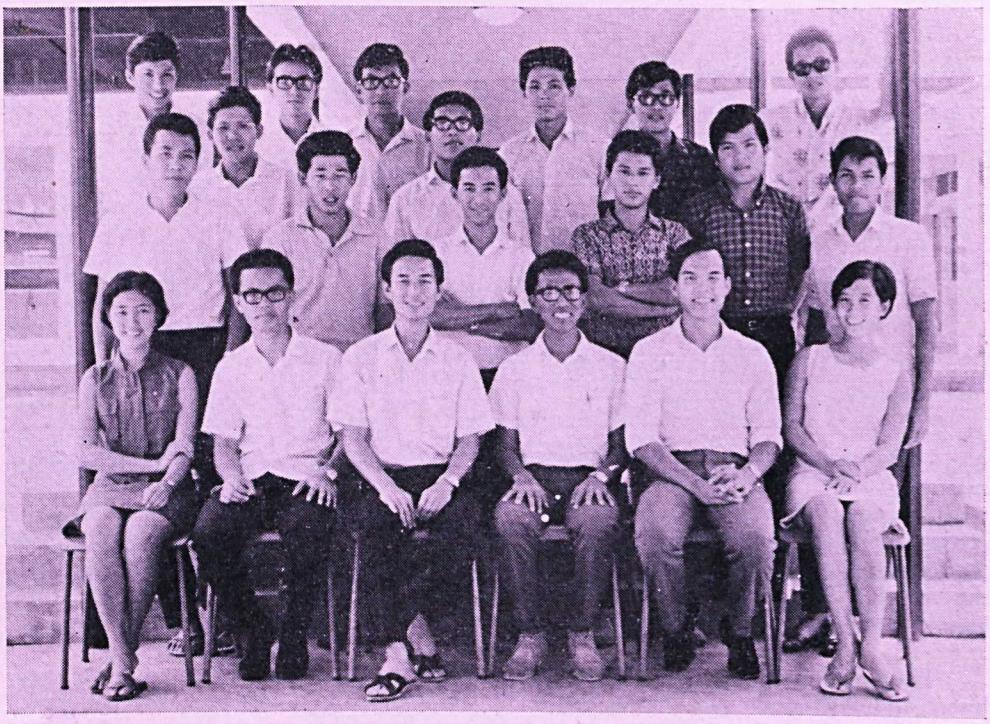
FOR many years past the Buddhist members of CASU had felt a need for the formation of a Buddhist Society to afford them religious guidance. However, it was not until the 4th October, 1966, that such an aspiration was fulfilled when in that year the student population of the College was increased 4-fold. Much of the success towards the formation of the Society was due to encouragements given by the Chief High Priest, the Ven. K. Dhammanda and Buddhist circles of other institutions, and, last but not the least to mention, several members of the Christian group here.

The main objectives of the Society are to study and promote Buddhism, to encourage, foster, and develop the qualities of Truth and Compassion in accordance with the practices and teachings of Buddhism; and to encourage friendship and understanding among members irrespective of race and religion. To try and achieve the principal aims occasional talks on various aspects of Buddhism were held. Some members also took the opportunity to go to Kuala Lumpur on Sundays with the College Bus sponsored by the Catholic Society for Church services, to attend religious services and forums. Whenever possible, recitation of Buddhist Devotions were held on New-moon and Full-moon nights.

Membership of the society is open to all Casuans (irrespective of race and creed) who are sincerely interested to gain a better understanding of Buddhism.

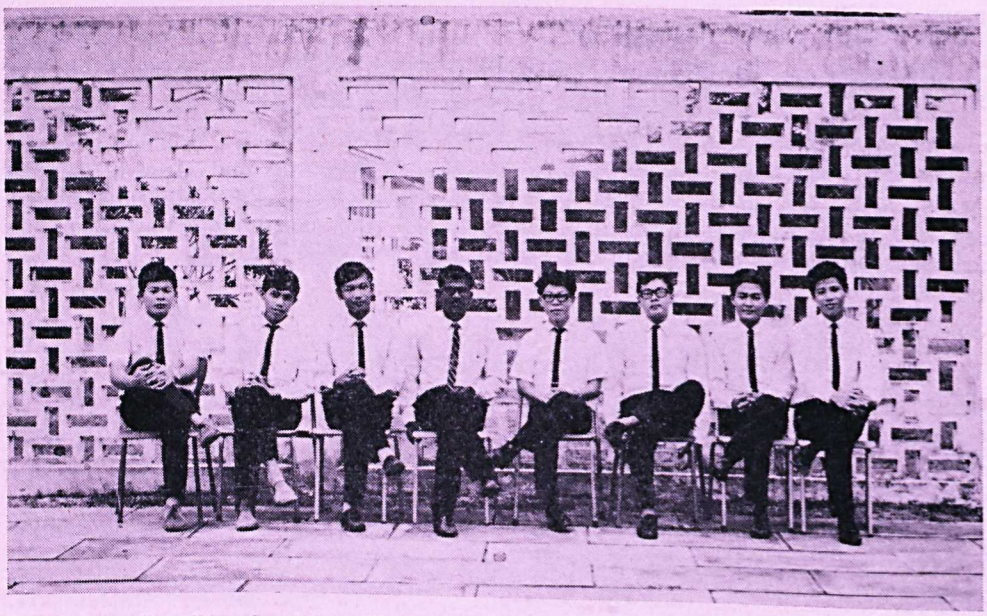
In conclusion, we wish to express our sincere gratitude to the Principal and the Registrar for alowing us the use of Lecture Room D, Mr. Mak and Mr. Oh for consenting to be our Hon. Advisers. Our thanks also go to the President and Council of CASU for the use of the Council Room, and others who helped in one way or another to make possible the existence of the Society.

Buddhist Society C.A.M.



Sitting (L to R): Adeline Cheng, Beng Paik, Tan Kee Kian, Soh Boon Tat, Hor Ah Ha, Yap Chin Yau.

Serdang Christian Fellowship



From L to R: Lim Ser Ling, Kheh Chai Heng, Chee Chuan Chai, N. Thiran, Law Eng Hock, Koh Boon Hwa, Goh Ah Bah, Fah Ah Ngau.

SERDANG CHRISTIAN FELLOWSHIP (SCF)

THE main aims of Fellowship is to fulfil our Lord's command to the believers "Go ye into the world and preach the Gospel to every man " Thus then our objectives are:-

a) To serve Christ Jesus as our Lord
b) To teach and preach forth the good news of God's salvation thru the Lord Jesus Christ.
c) To look to Him for guidance
d) To study His Word diligently
e) To encourage one another to hold fast onto the Faith

Activities

Here are some activities of the fellowship to fulfil the objectives. On each Thursday of the week, Gospel Meetings are held at 8.00 p.m. in either the Committee Room or the Lecture Room I. This meeting is specially conducted for all non-Christian and Christian students and lecturers, irrespective of their race, creed or religion.

Then on Saturday, the Christian gather to have fellowship with one another in prayer, Bible studies and sing some choruses and hymns. On Sundays we usually have College bus to take us for Breaking of Break meeting in K.L. We would thank God for His guidance and help in all our activities.

Acknowledgement:

Fellowship is very grateful to the Principal and the Registrar for allowing us to use the Lecture Room I, the Union for the use of the Committee Room and others who have helped us in one way or the other. To all of them a very big thank you.

Before I conclude with two verses from the Scripture for all of you to ponder over, I would again remind students to come and join us more often during the meetings,

"For God so loved the world, that He gave His only begotten Son, that **whosoever** believeth in Him Should not perish but have everlasting or eternal Life." John 3:16

"Believe on the Lord Jesus, and thou shall be saved." Acts 16:31

The names of those in the Photograph.

1) Koh Boon Hua
2) Thiran
3) Chee Chuan Chai
4) Goh Ah Bah
5) Law Eng Hock
6) Lim Ser Leng
7) Fah Ah Ngau.

REPORT OF THE SOCIAL & CULTURAL STANDING COMMITTEE 1967/68.

Chairman	:	Chin Tan Leong
Social & Cultural Sec:	:	Mohd Sepuan Anu
Asst. Social Sec.	:	Jamalludin Sulaiman
Film Secretary	:	Moses Chong
Record Librarian	:	Vincent Voon
Members	:	Allan Chan Chow Kong (*Finance Committee*)
		Bernard Chong (*Newspapers*)
		Sheikh Awadz (*T.V.*)

ACTIVITIES

Dances: This year we were only able to organise two dances namely the 'Freshmen Welcoming Dance' and the Carnival Dance held in conjunction with the Carnival Games. The second was unsuccessful one so much so we made a deficit.

Drama: To follow last years trend this year under the direction and help from Che Ahmad Rashid, our Farm Direction we successfully staged a play entitled 'Rafi & Parwani'. Once again we proved that not only could handle changkuls but we also can excell in the dramatic field. This was supposed to be our contribution to the PKM'S Cultural Night, but due to certain circumstances the Cultural Nights was put off.

Talentime: For the first time we held the Talentime Singing Contest and received a very encouraging support from both participants and audience.

Film Shows: If circumstances permitted we screened weekly film shows but at times when the projectors were out of order we were not able to put on the show.

Films Screened were:

'Cat on a Hot Roof'
'Town Without Pity'
'Topkapi'
'The Train'.
'Taras Bulba'.
'Courtship of Eddies father'.
''The State Affair'.
'The Cincinnati kid'.
'That Man from Rio'
'Pink Panther'.
'Once a thief'.

One trip was made to K.L. to enable our members to witness the screening of 'Gone With the Wind'.

This year owing to the increase in the number of students the newspapers order was increased.

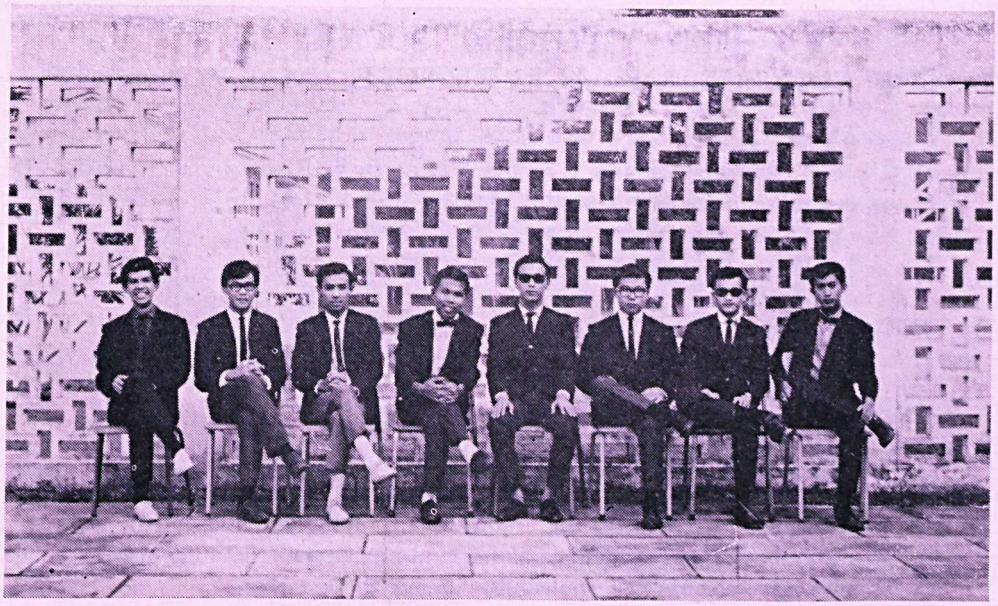
Maintenance & Repair

The repair of T.V. drained much of our allocated sum of money and also the maintenance of radiogramme.

To those who have helped the Committee, to the Committee members who had helped in carrying out our activities and others, to them I say thank you.

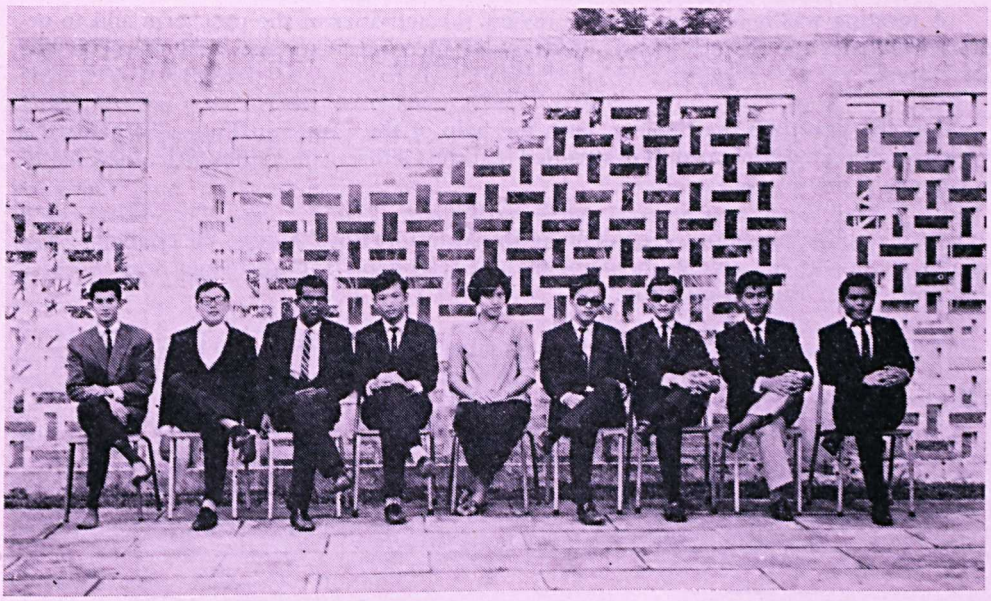
MOHD. SEPUAN ANNU
Social & Cultural Secretary.

Social & Cultural Committee



From L to R: Vincent Voon, Allan Chan Chow Kong, Jamalludin Sulaiman, Mohd. Sepuan Anu, Chin Tan Leong, Moses Chong, Sheikh Awadz Abdullah, Bernard Chong.

The Agriculture Bias Society



From L to R: Zainal Kharib, Koh Boon Wha, N. Thiran, Chee Chuan Chai (President), Miss Nancy Kwan, Tan Kwang How, Sheikh Awadz, Mohd. Nache Md. Nor, Rashid Ibrahim.

THE CATHOLIC SOCIETY
COLLEGE OF AGRICULTURE, MALAYA

Honorary Adviser	:	Mr. Efren S. Rivera
President	:	Mr. Gerard McGuire
Vice President	:	Miss Mary Huang
Secretary	:	Mr. Francis Chong
Treasurer	:	Mr. Yeoh Keat Choon
Committee Members	:	Mr. Christopher Lai Theam Mr. Lawrence Gubud Mr. Pheh Thean Teik

Aims:

The aims of the society are:-

1. To witness Christ through the co-ordination of the activities of the Society.
2. To foster better understanding and friendship among the students.
3. To encourage a sense of responsibility among the members.

Activities:

Prayers and novenas were said daily and weekly respectively. Besides these, the council too arranged for a van to take its members to St. John's Cathedral, Kuala Lumpur for Sunday mass and other similar occasions, except when mass was said here at Serdang by the Capuchin Fathers.

Talks by both the members of the laity and the clergy were organised for the members.

A meeting was held every term to review the activities of the past term and to organise activities for the next term. Emergency meetings were also held whenever the need arose.

For the first time the Society, with the help of the Capuchin Fathers organised a week-end retreat. Nine members attended it at the Gethsemani Friday, 7th mile Cheras, Selangor.

Realising the plight of the students of the Montfort Boys' Home, the council agreed to pass round the hat among its members. A reasonable sum of money was collected and donated to the organisation.

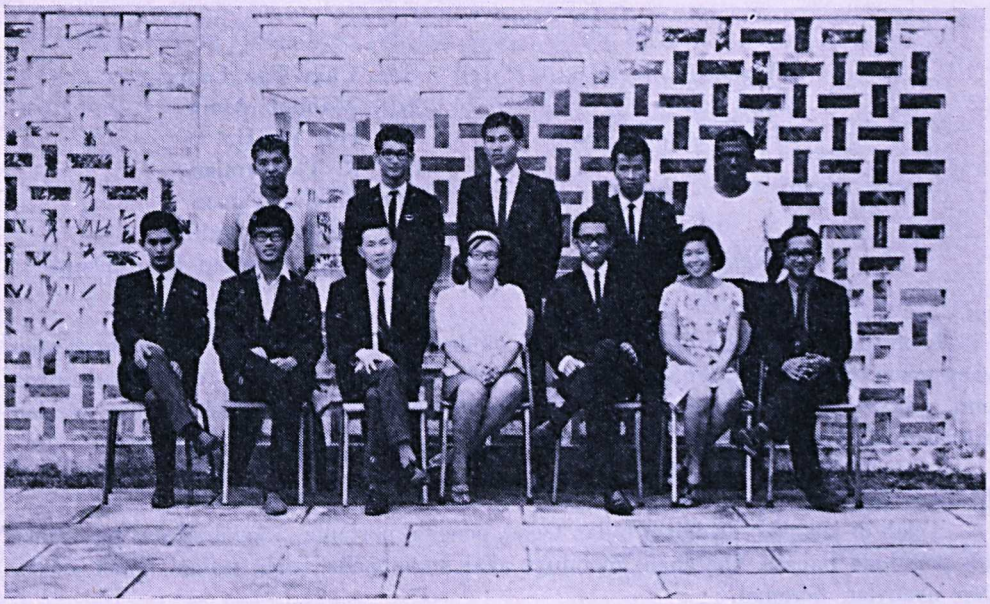
A Christmas party was also held for members, friends and the College staff.

Acknowledgement:

We give sincere thanks to the Principal for his kindness accorded to us by allowing us to use the van on Sundays. We are also thankful to the President of CASU for permitting us to have our prayers in the committee room and our meetings in the Council Room. Our thanks also go to Mr. Rivera who has kindly consented to be our advisor.

FRANCIS CHONG,
Secretary.

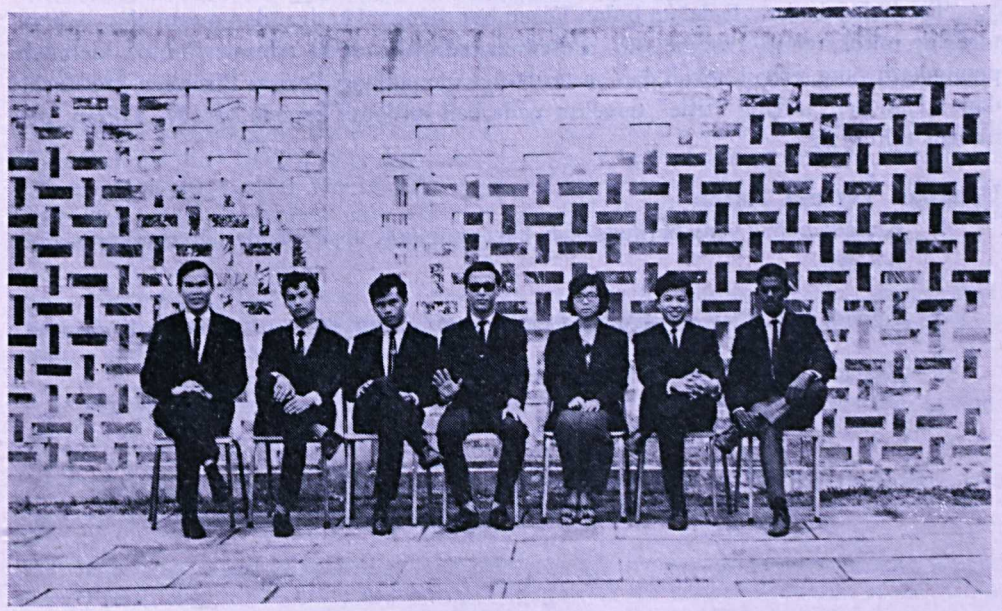
The Catholic Society



Standing (L to R): Pheh Thean Teik, Lai Chin Fook, Lawrence Gubud, Francis Nicholson.

Sitting (L to R): Christopher Hew, Yeoh Keat Choon, Francis Chong, Mary Huang, Gerard McGuire, Annie Kong Yuk Koh, Fung Wing Khin.

Lembaga Bahasa dan Persuratan



From L to R: Hor Ah Ha, Khalid Yaman, Mahbob Amir, Chin Tan Leong, Noraini Ibrahim, Syed Othman Syed Daud, R. Thiagarajah.

LEMBAGA BAHASA DAN PERSURATAN 1967/68

Pengerusi	:	Sdr. Chin Tan Leong
Setia Usaha	:	Sdr. Mahbob Amir
Ahli2 Jawatan-kuasa	:	Sdr. Hor Ha Ha
		Sdr. R. Thiagarajan
		Sdr. Khalid Yaman
		Sdr. Noraini Ibrahim
Wakil PPIKPM		Sdr. Syed Othman Syed Daud.

LAHIR-NYA Lembaga ini ada-lah dari pindaan Lembaga Bahasa dan Kebudayaan yang mana telah baharu sahaja di-lakukan di-dalam tahun 1967 ini. Walau bagaimana pun, perbedzaan tugas-nya tidak-lah bagitu terpesong sakali. Dan berikut ada-lah ranchangan2 yang telah dapat di-jalankan oleh Lembaga ini:

Malam Bahasa

Telah di-jalankan di-dalam bulan Ogos, penggal pertama. Achara2-nya termasok-lah peraduan bahath, sharahan, menduga akal, membacha sajak, tarian, lawak jenaka dan nyanyian beramai.

Kelas Bahasa Kebangsaan

Telah di-mulakan dari penggal pertama lagi, tetapi malang-nya selalu tersekat sahaja dek "activities" lain yang kerap kali terserempak di-waktu2 yang sama. Sa-bagaimana biasa juga, sambutan yang di-berikan ada-lah maseh lagi jauh sangat di-bawah dugaan, walau pun bilangan pelajar2-nya telah semakin meningkat, dan ini ada-lah satu2-nya sebab yang membuatkan pengajaran bagitu tawar sekali.

Malam Bahath

Telah di-jalankan di-dalam bulan Disember, penggal ketiga, dan merupakan achara terakhir untok tahun 1967/68 ini. Peraduan ada-lah antara tahunan, untok memileh pembahath yang terbaik sekali dan sa-terus-nya memenangi Perisai Pusingan Dr. Rashdan. Dan penyandang "title" tersebut pada kali ini jatoh kepada sdr. N. Thiran, penuntut tahun tiga.

Uchapan Terima Kaseh

1. Kepada pehak yang berkuasa dan kaki-tangan Kolej Pertanian di-atas kerjasama mereka.
2. Kepada ahli2 jawatan-kuasa Lembaga ini yang sentiasa sedia berkerjasama.
3. Kepada pelajar2 sekalian yang sentiasa memberi sokongan hangat.

HIDUP BERJASA!

BOB
Setia Usaha.

REPORT OF THE WELFARE COMMITTEE 1967/68

The Welfare Committee 1967/68 consist of the following members :-

Chairman	:	S. Sivarajah
Welfare Secretary	:	Roslie Madani
Hostel Secretary	:	Mohd. Fakhri Hamid
Asst. Hostel Secretary	:	Mohd. Nache Mohd. Nor.
Floor Representatives	:	Zainab Jalil Siti Hajar Ahmad Zainal Kharib Mohd. Sidek Mohd. Din Hashim Ahmad Arikiah s/o Appllasamy Fah Ah Ngau Heah Cheng San Mohd. Saifuddin Khudri Ramakrishnan s/o K. Nair Fung Wing Khin Lee Lin Cheng Syed Burhanudin Syed Bahaldin Hor Ah Ha

Student's Welfare

The student has increased tremendously, from over a hundred in 1965/66 to over four hundred at the present day. This increase in students population, by mathematical calculation is directly proportional to the increase in the number of students problems. However, the Welfare Committee hope to upset the proportional increase of the problems.

The outstanding problems which the Welfare Committee try to solve, but in vain, are the problems of food. One of the reasons behind this is that the tongue that has been created by God is not of the same biological composition and this make the students frustrated whenever a new menu is formalated. Second reason, which the Welfare Committee has recently discovered is about our cooks. Nevertheless, they are all good cooks; but, I think some of them needs refresher course, say at Merlin or Malaya Hotel in Kuala Lumpur.

As has been done in the previous year, the new intakes were given free Anti-tetanus injection, by the College. Provision was also made to students to them to have dental check up at the Kajang Dental Clinic. However, only five students were sent every fortnight. Permission had been asked to get students there for check up every week but unfortunately, it was not successful.

Ailing students were sent for treatment either to Kajang Hospital or General Hospital, K.L. In case of outpatient treatments, students, were sent to HO's Clinic Serdang Bahru and also to Reddy Clinic in K.L.

The visits of the mobile postal service has been increased. Despite the number of 'dhobies' in college, the Dhobie services was also increased.

The Students Relief Fund collected quite an amount of money from members and he fund was fully utilised by the needy students.

This year, cases of jaundice were found in the College and to prevent its spread a very stern measures were taken by the College and the Committee such as to refrain the Tau foo sellers from selling at the College and to eliminate salad and raw eating materials in the menu.

Public Welfare Services

On the 4th February, 1967, and 30th September 1967, a number (total) of 50 students donated their blood to the Selangor Blood Bank who with their Mobile Unit came to College.

A number of Donations in the form of money and clothes were received from members for the following funds and organisation:-

1. Harry Kydd's Fund
2. National Disaster Relief Fund
3. Old Man's Home, Cheras.

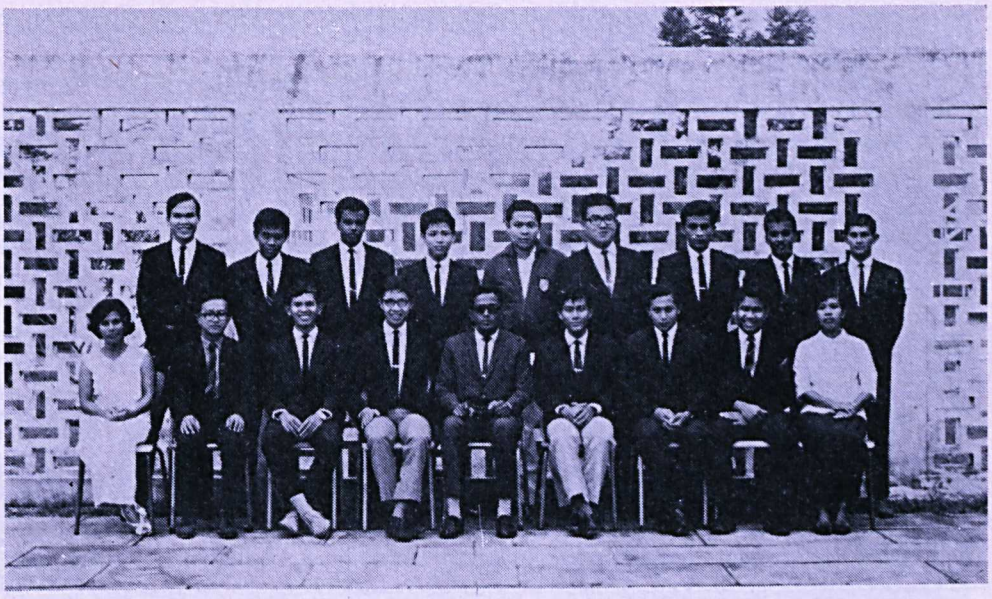
From the 28th October to 11th November, a small scale work camp was held every Saturday at Sekolah Laki2, Sungei Besi.

Acknowledgement:

On behalf of the Welfare Committee, I would like to take this opportunity to thank all members of CASU who had contributed for the smooth running of the committee. The committee also wish to thank the Principal, Farm Director, Hostel Stewards and the Cooks for their cooperation and understanding and lastly, to all committee members who had rendered their services and shared the problems together, for the benefit.

ROSLIE MADANI
Secretary.

The Welfare Committee



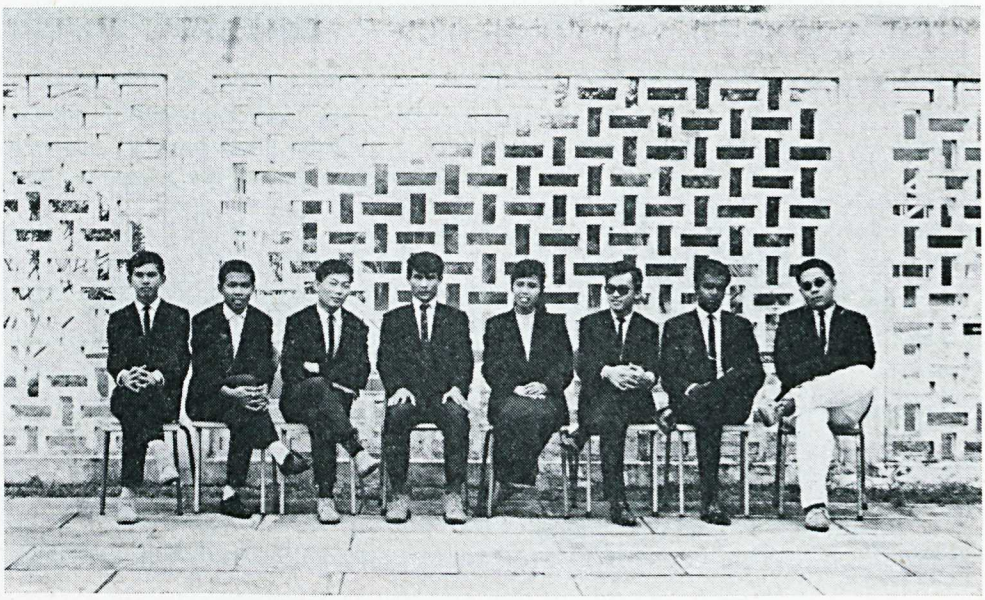
Standing (L to R): Hor Ah Ha, Syed Burhanudin, A. Arikiah, Fah Ah Ngau, Heah Cheng San, Lee Lin Cheng, Saifuddin Khudri, Remakrishnan, Zainal Kharib.

Sitting (L to R): Zainab Jalil, Fung Wing Khin, Fakhri Hamid, Roslie Madani, S. Sivarajah, Nache Md. Nor, Hashim Ahmad, Sidek Mohd. Din, Siti Hajar Ahmad.

Finance Committee

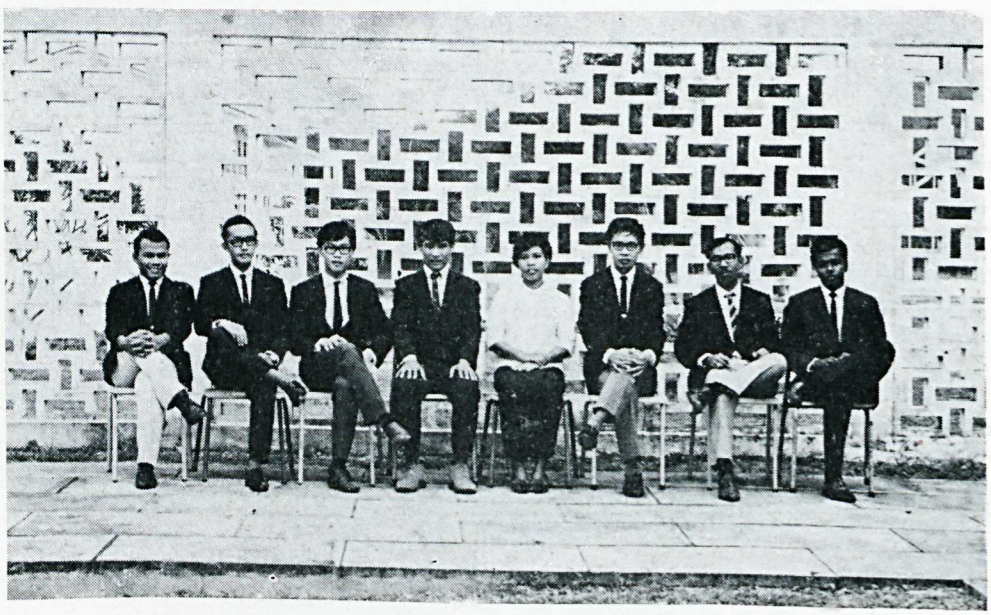
From L to R: Chen Fai Kok, Sonny Khaw, Pheh Thein Teik, S. Sivarajah, Sidek Md. Din, Allan Chan.

Games Carnival Organising Committee



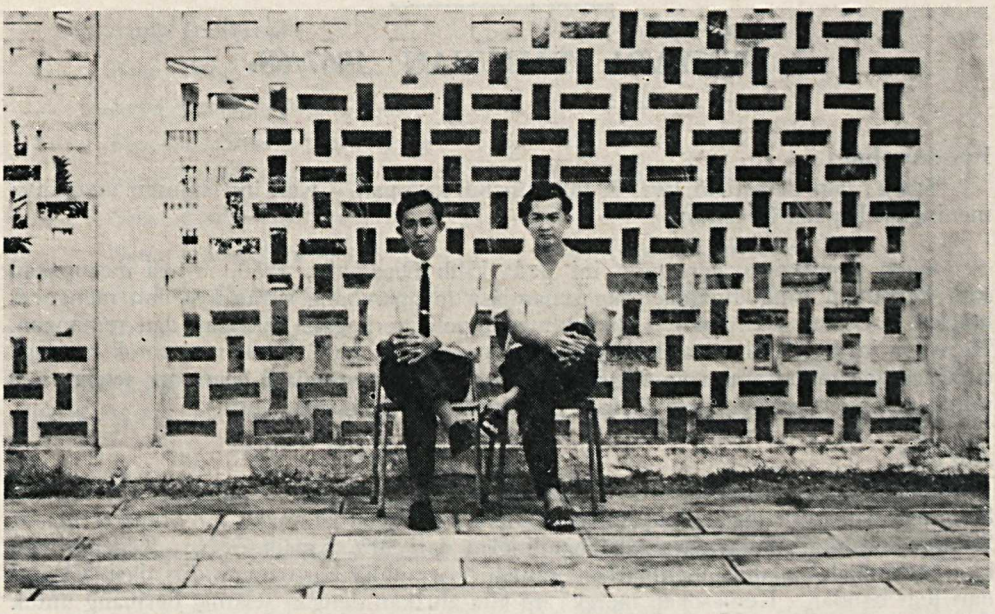
From L to R: Mohd. Fakhri Hamid, Mohd. Sepuan Anu, Poh Syee Wha, Sulaiman Daud (Chairman), Rashidah Manaf, Tan Kwang How, Arikiah, Heah Cheng San.

Delegates to N.S.C.



From L to R: Adam Amin, Zulkifly Shamsudin, Allan Chan, Sulaiman Daud, Siti Hajar, Roslie Madani, A. Bakar Adam, Arikiah.

Honorary Auditors



From L to R: Abang Harudin and Poh Kok Kian.

Student Exchange with MARA

PERSATUAN PELAJAR2 ISLAM KOLEJ PERTANIAN MALAYA.

PENYATA TAHUNAN 1967/68.

Pendahuluan

SEKALI lagi Persatuan PPIPK ini munchul kadepan. Kali ini lanjutan umor-nya meningkat kapada 17 tahun.

Se,ak penubohan Persatuan ini pada 15hb Disember, 1950, ia-nya merupakan satu Persatuan yang dinamis yang senantiasa mengembang sayap-nya dan mengorak langkah kadepan, walau pun terpaksa menempohi berbagai2 halangan dan rentangan. Ke,ayaan ini boleh di-teraskan kapada keazaman dan chita2 luhur-nya untok menjaga dan meninggikan taraf ugama, kebudayaan dan kebajikan pelajar2 Islam dan seterus-nya untok mengembangkan ilmu pertanian di-kalangan mas.arakat-nya.

Ahli2

Satu lambaran baru telah di-saksikan dalam hitongan jumlah ahli2-nya. Daripada 89 orang di-tahun sudah, kini jumlah ahli-nya meningkat ka-angka 238 orang termasok 25 orang wanita. Persatusan telah meningkat dari 30% kapada 55%. Kegembiraan kita bertambah2 apabila memikirkan jumlah besar ahli2 baru ini terdiri dari pelajar2 dari luar bandar. Kemasokan mereka ini kita alu2kan dengan selamat berjuang untok bangsa dan nusa.

Kewangan

Untok menjalankan urusan Persatuan, bayaran menjadi ahli di-kenakan sabanyak $3.00 dan yuran penggalan sabanyak $4.00. Selain daripada itu PPIKP juga menerima bantuan dari PPKP. Menerusi puncha2 ini-lah PPIKP dapat meranchang serta menyelenggarakan projek2-nya dengan lanchar. Pada keselurohan-nya ketegohan kewangan PPIKP ada-lah bergantong kapada ahli2-nya sendiri.

Pentadbiran

Segala urusan Persatuan ini di-kendalikan oleh MPI yang di-pileh sechara perlembagaan pada hari Meshuarat Agong Tahunan Pertama. Ahli2 MPI yang di-pileh terdiri dari:-

Yang Di-Pertua	Sdr. Othman Hasani
Naib Yang Di-Pertua	Sdr. Ahmad Hassan
Setia Usaha Agong	Sdr. Mahmood Don Jaafar
Penolong Setia Usaha Agong	Sdr. Mohd. Zain Rahmat
Setia Usaha Kewangan	Sdr. Mohd. Rani Hassan
Setia Usaha Ugama	Sdr. Mohd. Ghazali A. Aziz
Setia Usaha Rencham	Sdr. Syed Hussein A. Bakar
S/Usaha Persuratan & Kebudayaan	Syed Othman Daud
Setia Usaha Penerbitan	Sdr. Mazlan Sulaiman

Selain daripada itu Setia Usaha Tabong Derma juga termasok di-dalam barisan MPI. Ia-nya di-pangku oleh Sdr. M. Fadzil Mohamed yang telah di-lantek oleh ahli2 MPI yang di-pileh.

Pada awal bulan September, Sdr. Mohd. Zain Rahmat dan Sdr. Syed Hussein telah meletakkan jawatan masing2. Dalam pilehan raya kechil, Sdr. Mohd. Nache dipileh menjadi Pembantu Setia Usaha Agong dan Sdr. Abu Hanipah di-pileh sebagai Setia Usaha Rencham.

Sebelum Meshuarat Agong Tahunan Pertama, Persatuan ini di-kendalikan oleh ahli2 MPI sementara yang di-lantek. Mereka2 ia-lah:-

Yang Di-Pertua	Sdr. Othman Hasani
Naib Yang Di-Pertua	Sdr. Ahmad Hassan
Setia Usaha Agong.....	Sdr. Shahran Tafri
Penolong Setia Usaha Agong	Sdr. Mohd. Zain Rahmat
Setia Usaha Kewangan	Sdr. Abang Nuruddin
Setia Usaha Ugama.....	Sdr. Zaid Mohamed
Setia Usaha Rencham	Sdr. Wan Abdul Aziz
S/Usaha Persuratan & Kebudayaan	Sdr. Jamaluddin Sulaiman
Setia Usaha Penerbitan	Sdr. Mohamed Mahmud

Dua orang Pemereksa Kira2 yang terdiri dari ahli biasa telah di-pileh dalam Meshuarat Agong Tahunan Pertama. Mereka ia-lah:

Sdr. Mohd. Nache

Sdr. Amir Hussin Baharuddin

Kemudian-nya Sdr. Zakri Hamid telah di-lantek mengganti Sdr. Mohd. Nache yang telah meletak jawatan.

Selain daripada itu dua orang Penasihat Kehormat juga di-lantek. Mereka ia-lah:-

Tuan Haji Mohd. Din Ali, PJK, S/U Tetap Perbandaran K. L.

Encha Mohd. Rashid Ahmad, Pengarah Ladang, K.P.M.

Meshuarat

Persatuan telah mengadakan Meshuarat Agong Tahunan Pertama pada 1hb Julai, 1967, di-mana ahli2 MPI yang di-pileh telah dengan resmi-nya mengambil aleh dari MPI Sementara. Meshuarat Agong Tergempar telah jua di-adakan pada 13hb September, 1967 guna membinchang perletakan jawatan2 Penolong Setia Usaha Agong dan Setia Usaha Rencham dan seterus-nya memileh pengganti2-nya. Meshuarat MPI juga telah di-adakan sabulan sekali dengan bertujuan menerima dan mengkaji kegiatan2 Persatuan. Jawatan-kuasa Tadbir juga bermeshuarat dari masa kesemasa.

LAPORAN JAWATAN-KUASA2 TADBIR

1. Jawatan-Kuasa Tadbir Ugama:

Jawatan-kuasa ini terdiri daripada:—

Pengerusi	:	Sdr. Othman Hasani
Setia Usaha	:	Mohd. Ghazali A. Aziz
Ahli2	:	Sdr. Saidin Teh
		Sdr. Mohamed Bakar
		Sdr. Mohd. Yusoff Hussein
		Sdri. Noraini Ibrahim

Di-antara ranchangan2 yang telah di-jalankan:—

a) **Sharahan Ugama**

1. "Peranan pelajar2 Islam terhadap masharakat luar bandar", oleh Enche Mohamed bin Jamil.
2. "Sains dan Ugama" oleh Enche Ariffin Suhaimi.
3. "Kebesaran Ugama Islam" oleh Tuan Haji Ali Munawar.

b) **Pertandingan Membacha Al-Quran**
Pertandingan ini telah di-adakan pada Penggal II. Sekali lagi peserta dari Sekolah Al-Hamidiah Kajang berjaya menyimpan piala rebutan hadiah Enche Zainol Rashid.

c) **Seri2 Ugama**
Siri2 ugama telah di-sebar kapada ahli dari masa ka-semasa.

d) **Kelengkapan Bilek Sembahyang**
Sebagai lanjutan dari tahun2 sudah, banyak buku2 ugama di-tambahkan. Selain daripada itu kain2 sujud dan sejadah2 sembahyang juga di-lengkapkan di-Bilek Sembahyang.

2. **Jawatan-Kuasa Tadbir Rencham:**
Jawatan-kuasa ini terdiri dari:—

Pengerusi	:	Sdr. Ahmad Hassan
Setia Usaha	:	Sdr. Abu Hanipah
Ahli2	:	Sdr. Wan Abdul Aziz
		Sdr. Azizan Mustapha
		Sdr. Khalid Yaman
		Sdri. Azami Omar.

Diantara ranchangan2 yang telah di-jalankan:—

a) *Perlawanan Antara Maktab:*
Satu perlawanan bola persahabatan telah di-adakan pada Penggal I.

b) *Majlis Jamuan:*
Sa-takat ini dua jamuan telah di-adakan, ia-itu untok mera'ikan kedatangan ahli2 baru dan jamuan kerana menyambut ketibaan Bulan Puasa.

c) *Lawatan Sambil Belajar:*
Lawatan ka-renchangan L.T.K.P., Sungai Buaya telah di-buat. Seramai 80 orang ahli telah menyertai-nya.

d) *Perlawanan Antara Ahli:*
Bagi menggalakkan ahli2 mengambil bahagian chergas dalam achara sokan, perlawanan2 bola tangkis, pingpong dan kerom telah di-adakan.

3. **Jawatan-Kuasa Tadbir Persuratan & Kebudayaan:**
Jawatan-kuasa Tadbir ini terdiri daripada:—

Pengerusi	:	Sdr. Ahmad Hassan
Setia Usaha	:	Sdr. Syed Othman Syed Daud
Ahli2	:	Sdr. Mazlan Duaji
		Sdr. Hashim Ahmad
		Sdri. Rashidah Manaf
		Sdri. Siti Hajar Ahmad.

Di-antara ranchangan2 yang telah di-jalankan:—

a) *Berbahath dan Berbalas Pantun antara maktab:*
Dengan usaha jawatan-kuasa ini, peesrta2 kita telah turut serta dalam pertandingan di-atas. Keputusan-nya peserta kita telah menjadi johan dalam Peraduan Berbalas Pantun dan naib johan dalam Pertandingan Berbahath.

b) *Kelas Silat Seni Gayong:*
Ini ia-lah ranchangan yang teragong bagi Tadbir ini. Seramai 56 ahli termasok 3 wanita telah mendaftar dan latehan oleh guru terkemuka di-adakan 2 kali seminggu. Ahli2 ini dengan sendiri-nya menjadi ahli Silat Gayong Chawangan Negeri Selangor.

c) *Pertunjokan Pentas:*
Malam menyelami Bakat telah di-adakan di-mana nyanyian dan lawak jenaka jenaka telah di-persembahkan. Kemudian-nya Malam Kebudayaan pula di-pentaskan. Di-antara achara2 istimewa ia-lah persembahan "Adat Perkahwinan Orang Negeri Sembilan".

d) *Cheramah:*
Cheramah bertajok "Peranan Bahagian Latehan MARA Dalam Membaiki Taraf Hidup Bumiputera" telah di-adakan. Pencheramah-nya ia-lah 2 orang Pegawai MARA yang di-undang khas.

e) *Pembelian buku2 dan piring hitam:*
Memandangkan bartambah ramai-nya ahli2 pada tahun ini, lebeh banyak peruntokan wang telah di-buat untok membeli buku2, majalah, akhbar dan piring2 hitam.
Kelas2 tarian tidak dapat di-adakan kerana kesulitan mendapat guru tari. Namun begitu, ahli2 telah di-beri galakan untok berlateh bersendirian. Kesan-nya dapat di-lihat di-Malam Kebudayaan dan Malam PKPIM di-Universiti Malaya.

4. **Jawatan-Kuasa Tadbir Penerbitan:**
Ahli2 jawatan-kuasa terdiri daripada:—

Pengerusi	:	Sdr. Othman Hasani
Setia Usaha	:	Sdr. Mazlan Sulaiman
Ahli2	:	Sdr. Mahbob Amir
		Sdr. Mohamed Mahmud
		Sdr. Ismail Mahadi
		Sdr. Salleh Kadimi
		Sdr. Amir Mahmud
		Sdri. Hamidah Abdullah

Di-antara ranchangan2 yang telah di-jalankan:—

a) *Majalah Agraria:*
Suntingan2 dari tahun lepas telah di-terbitkan dengan jaya-nya. Sebanyak 500 naskhah telah di-chetakkan untok ahli dan setengah2-nya di-hantar kapada bekas2 ahli.

b) *Warta Pelajar:*
Sahingga ini pengeluaran-nya tetap tiap2 bulan. Sambutan dari ahli2 sejak akhir2 ini sangat2 memuaskan.

c) *K a l e n d a r :*
Perchetakan-nya yang berjumlah 5,000 naskhah itu merupakan satu kejayaan yang besar bagi PPIKP. Pengeluaran-nya bertujuan mengenalkan Kolej Pertanian kapada umum khas-nya Bumiputera. Ahli2 telah berjaya menyebarkan-nya kaserata daerah Malaya. Penyebaran-nya juga di-buat melalui pos.

d) *Kad Selamat Hari Raya:*
Sebagaimana biasa Tadbir ini sekali lagi menchetak kad2 Selamat Hari Raya. Kali ini perchetakan-nya berjumlah 5,000 keping dan di-jual dengan harga 10 sen, tiap2 satu.

5. **Jawatan-Kuasa Tadbir Kewangan:**
Ahli2 jawatan-kuasa ini terdiri dari:

Pengerusi	:	Sdr. Othman Hasani
Setia Usaha	:	Sdr. Mohd. Rani Hassan
A h l i 2	:	Sdr. Kamaruddin Haji Ali
		Sdr. Hussin Salleh
		Sdr. Abdul Rahman Jalil
		Sdri. Rabirah Awang.

Pada mula-nya Tadbir ini berpaksa mengarah ahli2 jawatan-kuasa-nya memungut yuran penggalan dari ahli2. Di-akhir2 ini dengan usaha Tadbir dan Setia Usaha Agong, maka pehak Kolej telah bersetuju memotong wang yuran ahli2 melalui Bursur.

6. **Jawatan-Kuasa Tadbir Tabong Derma:**

Ahli2 Jawatan-kuasa ini terdiri dari:—

Pengerusi	:	Sdr. Othman Hasani
Setia Usaha	:	Sdr. M. Fadzil Mohd.
		Sdr. Jaafar Isa
		Sdr. Azizan Haji Ismail
		Sdri. Norain Rejab
		Sdr. Silahudin Djardiz.

Ahli2 Lembaga Penyimpan Amanah terdiri dari:—

1. Dr. Mohd. Rashdan bin Baba
   Pengetua Kolej Pertanian Malaya.
2. Tuan Haji Mohd. Din Ali
   Setia Usaha Tetap Perbandaran, Kuala Lumpur.
3. Enche Mohd. Rashid Ahmad
   Pengurus Ladang, Kolej Pertanian Malaya.

Di-akhir2 ini derma telah di-potong melalui Bursar, Kolej. Jawatan-kuasa juga telah berusaha mendapat derma2 dari bekas penuntut2 Islam.

DARI MEJA SEKRETARIAT

1. **Sharahan Ka-Sekolah2 Menengah**

Satu pengurbanan besar yang telah di-jalankan oleh ahli2 PPIKP, ia-lah dengan menjelajah keserata tanah ayer memberi penerangan dan penjelasan mengenai Kolej Pertanian kapada murid2 sekolah menengah. Kesempatan ini di-ambil semasa chuti panjang dan chuti Penggal I. Pada keselurohan-nya sambutan yang di-terima sangat2 memuaskan.

2. **Penerangan Bersurat**

Satu langkah baru yang telah di-ambil oleh PPIKP untok memperkenalkan Kolej Pertanian ini kapada masharakat umum terutama dari luar bandar ia-lah dengan memberi penerangan2 sechara bersurat. Setakat ini lebeh dari 200 surat dari orang persaorangan telah di-terima.

3. **Seminar Peradaban Islam**

PPIKP telah menyambut baik Seminar ini yang di-taja oleh Persatuan Pelajar2 Kolej Islam Malaya. Asas Seminar ini ia-lah untok merentas jalan bagi penubohan satu Universiti Islam yang berchorak nasional.

Perwakilan PPIKP terdiri dari:
Sdr. Othman Hasani
Sdr. Mahmood Don Jaafar
Lebeh kurang 40 ahli lain PPIKP telah juga menyertai sebagai pemerhati2.

4. **Meshuarat Agong Tahunan KKPIM 1967/68**

Meshuarat ini telah di-adakan di-Asrama Pertama, Universiti Malaya. Para perwakilan PPIKP terdiri dari:

Sdr. Othman Hasani
Sdr. Mohd. Zain Rahmat
Sdr. Syed Othman.
Sdr. Mohd. Zain Rahmat di-pileh menjadi Setia Usaha Kebajikan PKPIM.

5. **Persidangan P.M.I.A.T.**

Persidangan di-perengkat antarabangsa ini di-anjorkan oleh PKPIM dan telah di-adakan selama 3 hari di-Universiti Malaya. Sdr. Othman Hasani telah mewakili PKPIM dan Sdr. Syed Othman Daud mewakili PPIKP.

6. **Simposium**

Satu simposium yang bertajok "Masaelah Pendudok Luar Bandar" telah di-jayakan oleh PMUM, bertempat di-Universiti Malaya. PPIKP telah menghantar 8 orang ahli sebagai wakil dan pemerhati. Di-Kolej ini pula, satu "Simposium Kechil Pimpinan" telah juga di-jayakan. Tujuan-nya untok memberi latehan pimpinan kapada ahli sambil memberi kesedaran terhadap perimustahak-nya satu2 Persatuan.

7. **Cheramah**

Samasa kunjongan saudara2 kita dari Himpunan Mahasiswa Islam atau H.M.I. dari Indonesia, kita sempat menjemput mereka bercheramah tentang "Serbaserbi Tentang Mahasiswa Pertanian Di-Indonesia". Mereka2 ini terdiri dari Sdr2. Taufik Ismail, Faisal Basir dan Akie. Ahli2 juga berpeluang mendengar cheramah mengenai "Angkatan Kajian Sains" yang di-sampaikan oleh Yang Di-Pertua ANGKASA, Sdr. Mohd. Mahzan Ayob.

Selain dari kegiatan2 yang di-anjorkan oleh PPIKP sendiri, ahli2 juga di-beri peluang dan kemudahan2 untok menghadziri majlis2 keramaian, upachara2 penting dan perhimpunan2 luar seperti Sambutan Maulud Nabi, Pertandingan Membacha Al-Quran di-perengkat maktab dan Antarabangsa dan lain2 lagi.

LAIN2 HAL

Badan Khas Pelajaran

Badan ini di-tubohkan sebaik2 sahaja MPI 1967/68 mengambil aleh dari MPI Sementara Badan ini bertujuan mengawasi dan menyediakan kemudahan2 pelajaran bagi ahli2. Jawatan-kuasa-nya terdiri dari:—

Pengerusi	:	Sdr. Ahmad Hassan
Setia Usaha	:	Sdr. Amir Hussin
Ahli2	:	Sdr. Sha'ari Haji Hamid
		Sdr. Abu Hanipah
		Sdr. Ali Sujan
		Sdr. Ghazali Selamat
		Sdr. Nawi Yusoff
		Sdr. Mahmud Ahmad
		Sdri. Zainab Zaini.

Di-antara ranchangan2 yang telah di-jalankan ia-lah:—

a) Cheramah2 akademi yang di-jayakan oleh
   i) Penolong Pengarah Ladang
   ii) Pencheramah2 jemputan
   iii) Ahli2 PPIKP sendiri.
b) Perbinchangan2 (discussion) mengenai mata-pelarajan tertentu.
c) Memberi panduan2 dalam teknik perladangan dan perkebunan.
d) Mengumpul istilah2 pertanian dengan kerjasama jabatan DBP.
e) Mengumpul risalah2 pertanian dari badan2 krerajaan dan bukan kerajaan
f) Menyediakan kertas2 soalan pepereksaan bagi semua tahun.
g) Mengendalikan Perpustakaan PPIKP.
h) Mengadakan kelas ajaran persaorangan (personal tuition) kapada ahli2 yang tertinggal dalam pelajaran.

Khemah Kerja

Hasil dari persediaan sejak akhir tahun lalu lagi, Khemah Kerja ini telah di-adakan dengan jaya-nya di-Kg. Sungai Sireh, Tanjong Karang mulai dari 1hb hingga 3hb September, 1967. Ahli2 jawatan-kuasa yang menyelenggarakan-nya terdiri dari:—

Pengerusi	:	Sdr. Othman Hasani
Setia Usaha	:	Mohd. Zain Rahmat
Ahli2	:	Sdr. Rahim Sail (Perkakas)
		Sdr. Zakri Hamid (Kenderaan)
		Sdr. Fakri Hamid (Tempat-tidor)
		Sdr. Rosli Madani (Makanan)
		Sdr. Ahmad Hassan (Malam Anika Warna)
		Sdri. Rashidah (Hal Ehwal Wanita)
		Sdr. M. Fadzil (Ketua Kerja)
		Sdr. Mahmood Don (Ketua Kerja)

Khemah Kerja ini di-anjorkan dengan 3 tujuan yang besar:—

(a) Memberi peluang kapada pelajar2 mengenal lebeh dekat lagi chara penghidupan petani2.

(b) Memberi kesedaran kapada petani2 terhadap dunia pelajaran dan kemajuan terutama-nya dalam segi teknoloji.

(c) Memberi sumbangan tenaga sambil menchontohi chara2 bertani yang sesuai kapada petani.

Pada keselurohan-nya, khemah kerja yang di-sertai oleh 85 orang ahli ini (termasok 17 wanita) telah mendapat kejayaan yang chemerlang dalam segi perlaksanaan dan juga dari segi kesan2 yang di-perolehi-nya.

Penghargaan

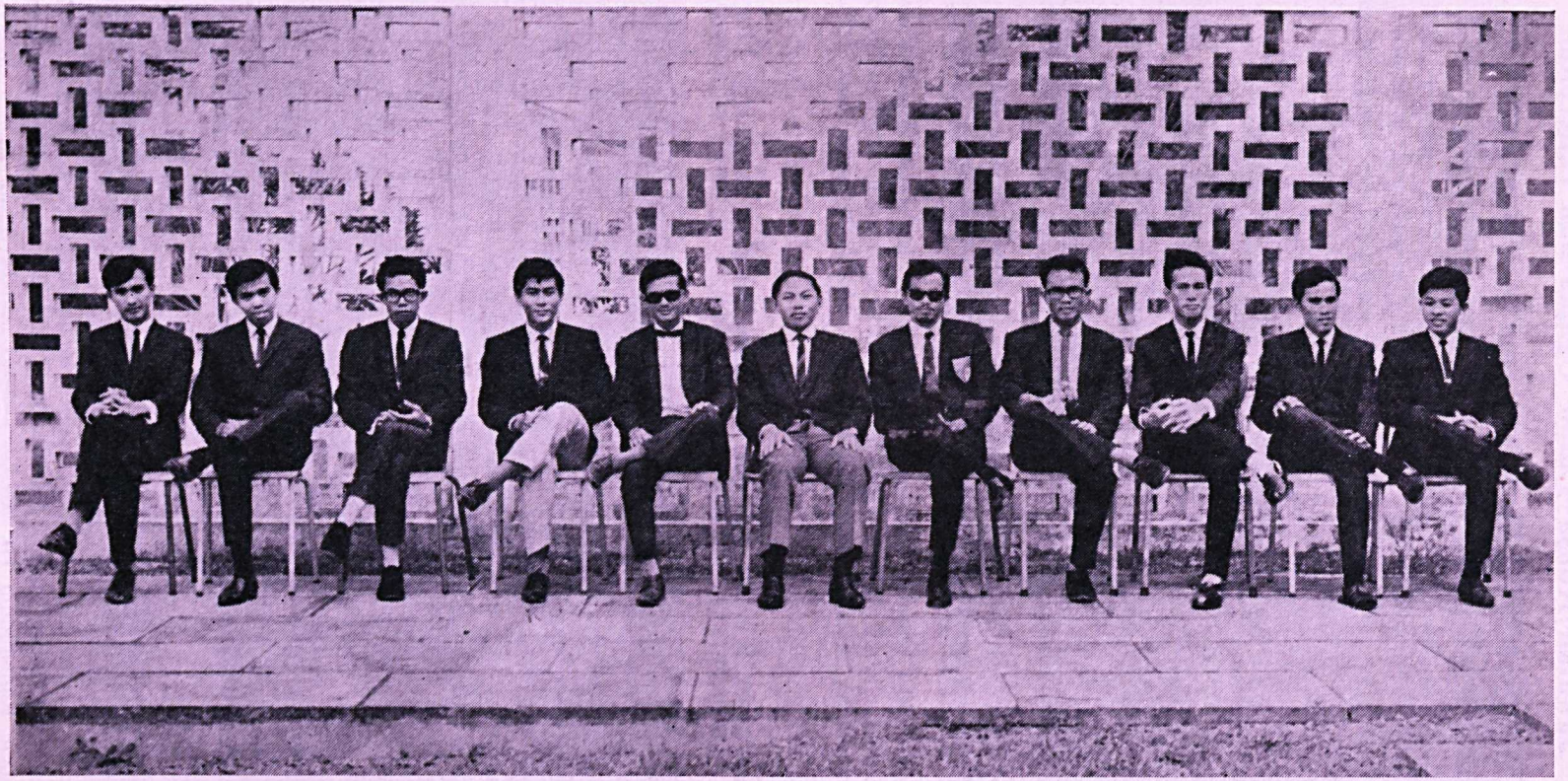
Kita menguchapkan setinggi terima kaseh dan penghargaan kapada Pehak Berkuasa Kolej terutama-nya Tuan Dr. Mohd. Rashdan, dan kakitangan2 pejabat yang tertentu yang sentiasa memberi segala bantuan, kemudahan dan kerjasama dalam usaha kita untok melaksanakan dan menjayakan ranchangan2 kita. Uchapan terima kaseh jua kita tuju kapada Tuan Haji Mohd. Din Ali, PJK, dan Che Gu Mohd. Rashid Ahmad yang terus menerus sanggup menjadi Penasihat Kehormat PPIKP. Kapada pehak PPKP, kita tidak lupa jua berterima kaseh di-atas segala kerjasama yang di-beri, dan ada-lah menjadi harapan kita semuga kerjasama dan persefahaman ini akan terus berkekalan. Kapada pehak PKPIM, badan2 lain dan orang persaorangan, kita tidak lupa berterima kaseh di-atas segala pertolongan yang mereka beri. Semuga di-berkati Allah di-atas pertolongan mereka.

BERTANI UNTOK BERBAKTI.

MAHMOOD DON JAAFAR,
Setia Usaha Agong,
PPIKP 1967/68.

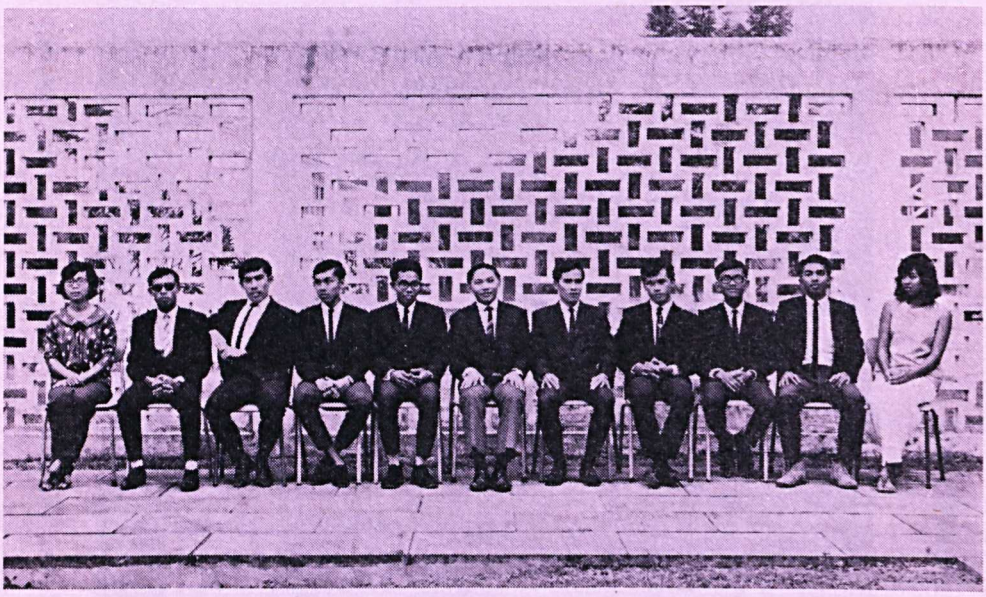
Bertarikh: 30hb Disember, 1967.

MAJLIS PELAJAR2 ISLAM KOLEJ PERTANIAN



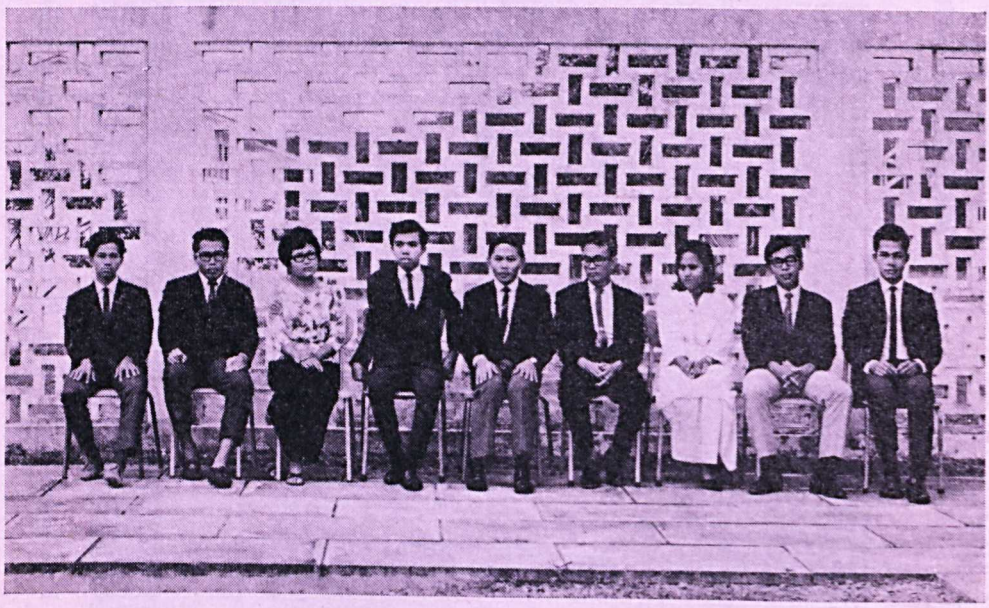
KIRI KA-KANAN: *Amir Husin, Fadzil, Ghazali, Nache, Ahmad Hassan, Othman Hasani, Mahmud Don, Rani Hassan, Abu Hanifah, Mazlan, Syed Othman.*

Jawatan Kuasa Tadbir Ugama dan Penerbitan



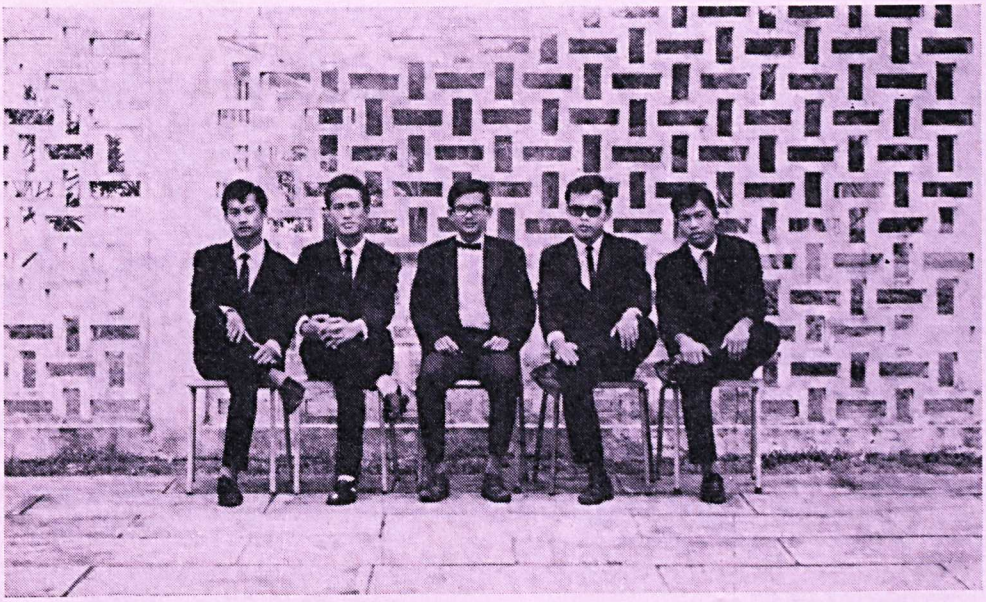
Dari kiri: Sdri Noraini Ibrahim, Sdr Saidin Teh, Mohamad Bakar, Mohd. Yusoff Hussein, Ghazali A. Aziz (S/U Ugama), Othman Hasani, Mazalan Sulaiman (S/U Penerbitan), Mahbob Amir, Salleh Kadimi, Mohd. Mahmud, Hamidah Abdullah.

Jawatan Kuasa Tadbir Kewangan dan Tabong Derma



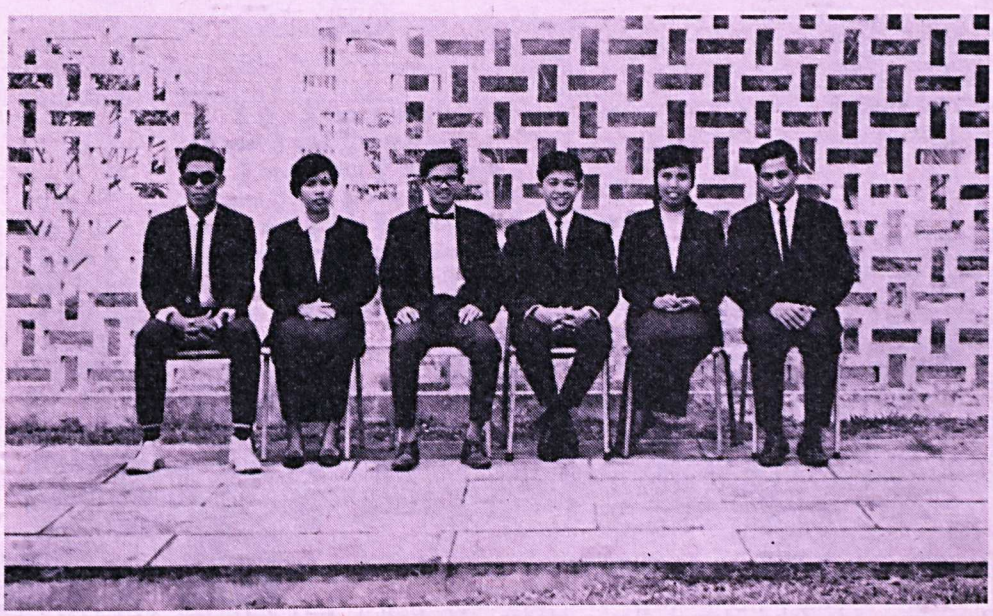
Dari kiri: Azizan Hj. Ismail, Silahudin, Norain Rejab, Mohd. Fadzil, (S/U Tabong Derma), Othman Hasani, Rani Hassan (S/U Kewangan), Rabirah Awang, Hussin Salleh, Kamaruddin Hj. Ali.

Jawatan Kuasa Tadbir Rencham



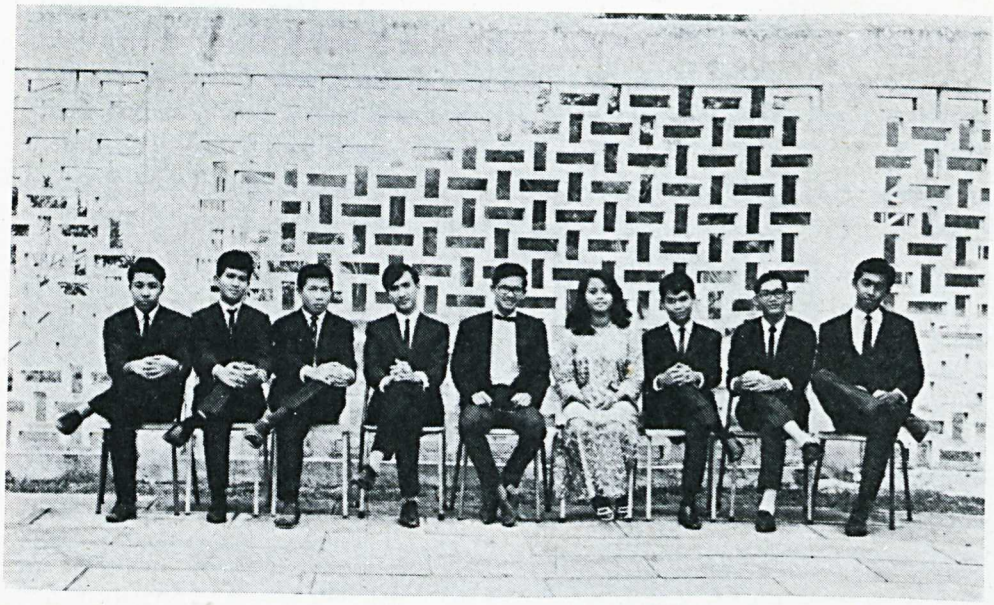
Dari kiri: Sdr2 Khalid Yaman, Abu Hanipah (Setia Usaha), Ahmad Hassan (Pengerusi), Wan Abdul Aziz, Azizan Mustapha.
Tiada hadhir: Sdri Azami Omar.

Jawatan Kuasa Tadbir Persuratan & Kebudayan



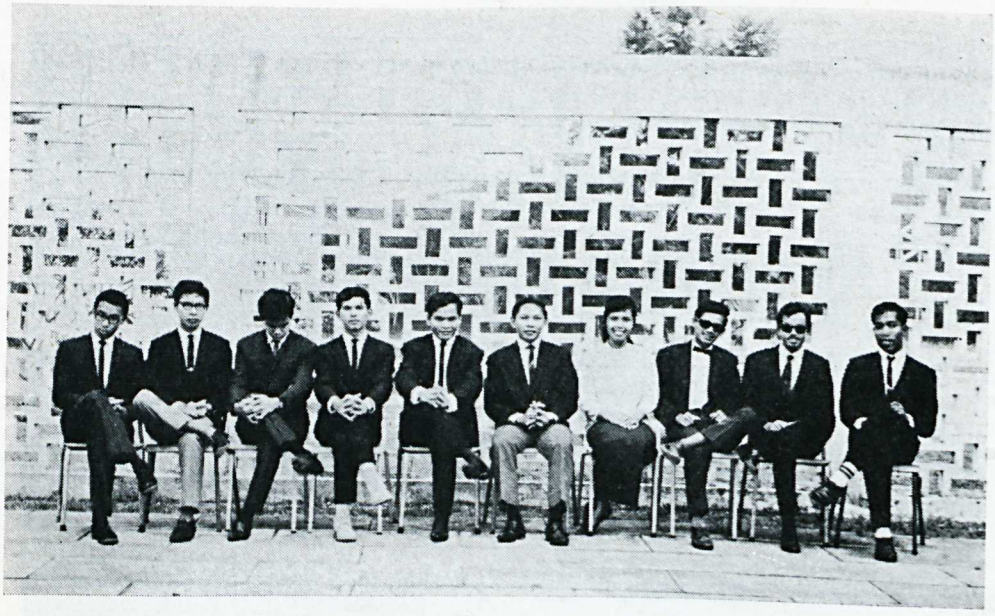
Dari kiri: Sdr2 Mazlan Duaji, Sdri Siti Hajar Ahmad, Ahmad Hassan, Syed Othman Syed Daud, Sdri Rashidah Manaf, Hashim Ahmad.

Badan Khas Pelajaran



Dari kiri: Sdr2 Mahmud Ahmad, Bachok Mustaffa, Nawi Yusoff, Amir Hussin, Ahmad Hassan, Sdri Zainab Zaini, Sha'ari Hj. Hamid, Ali Sujan, Ghazali Selamat.

Ahli2 Jawatan Kuasa Khemah Kerja



Dari kiri: Sdr Zakri Hamid, Roslie Madani, M. Fadhil, Fakhri Hamid, Mohd. Zain Rahmat, Othman Hasani, Rashidah Manaf, Ahmad Hassan, Mahmood Don Jaafar, Rahim Sail.

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OTHMAN HASANI
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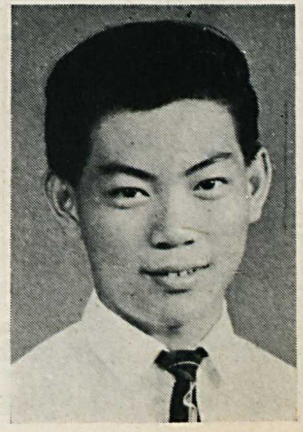
Kg. Merbau, Sempak,
Sungai Buloh, Selangor.



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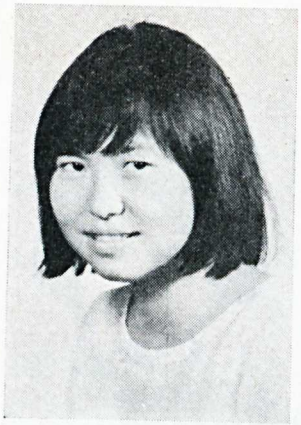

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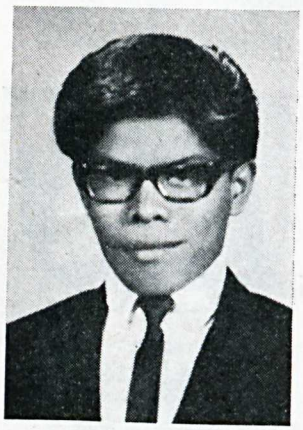
Sg. Petani, Kedah.



ITHNIN BUJANG
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Benut, Batu Pahat,
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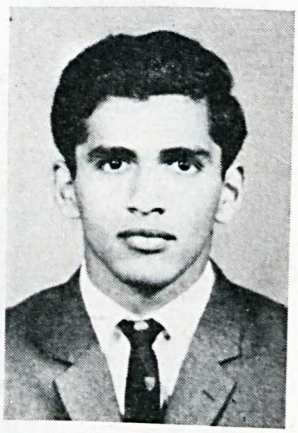

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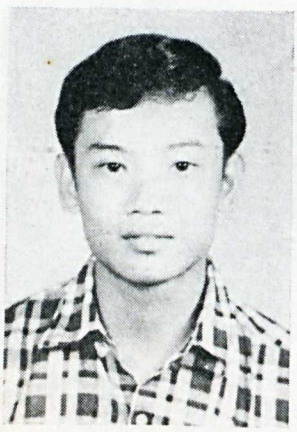

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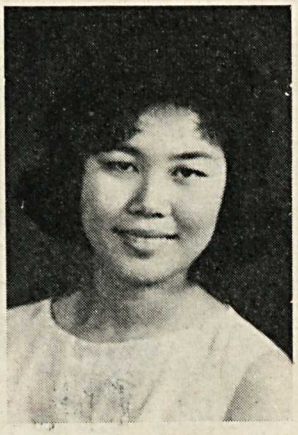

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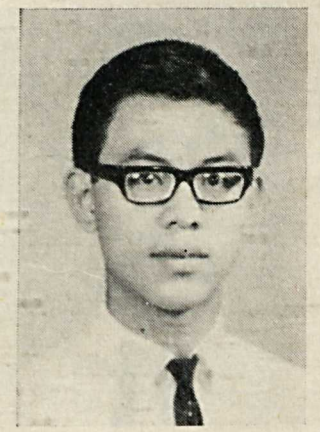

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LIM MING LEE
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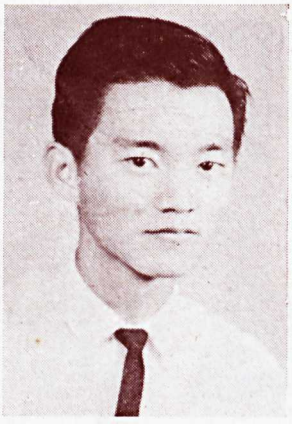

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Johore.

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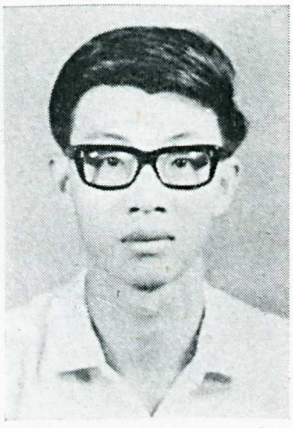
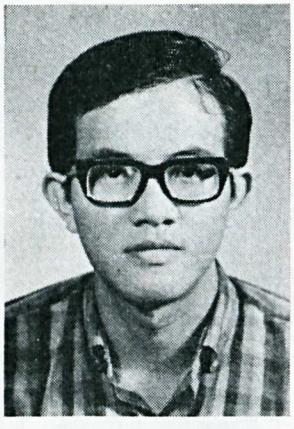
Mara Scholar,
3174, Gong Nangka,
Jerteh, Trengganu.

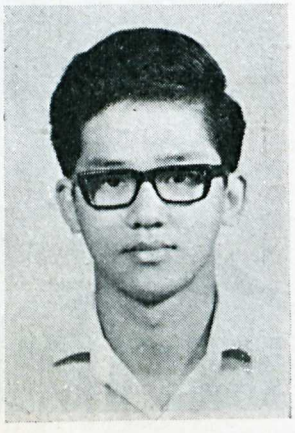


LEE FOOK WING
P.O. Box 793,
Sandakan, Sabah.

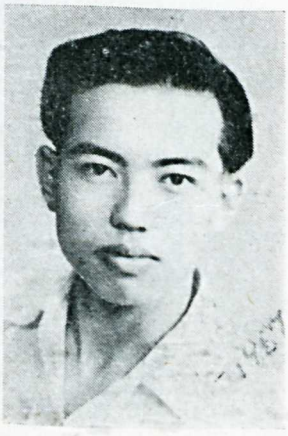


LEE WAI WAH
F.A.S.,
31, Jalan Kerai 8/12,
Petaling Jaya,
Selangor.

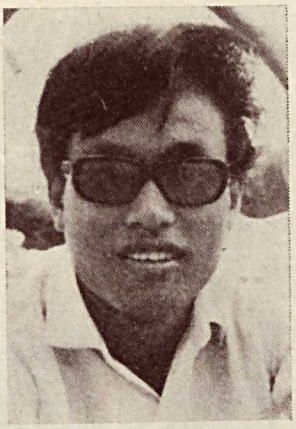
KU SIEW BING
Guthrie's Scholar,
32, Changkat Kruing,
N/V, Perak.



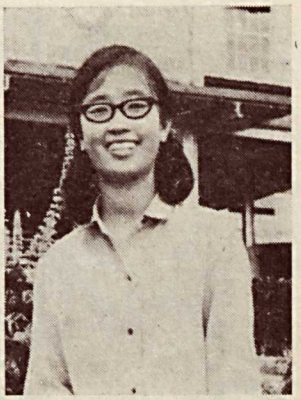
KHOO SU CHIN
M.E.O.A. Scholar,
161, New Village,
Buloh Kasap,
Segamat, Johore.



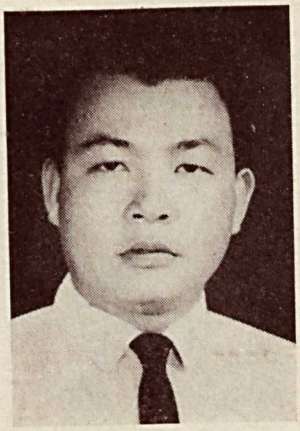
LOH KUM YING
259 (J), Templer Road,
Seremban.



MOKHTAR HJ. ISMAIL
F.A.S.,
c/o Hj. Ismail bin Hassan
Kg. Tembiling,
K. Lipis, Pahang.

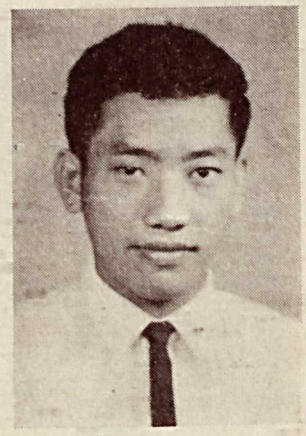


LIM FONG MENG
281-D, Wallich Street,
Seremban.



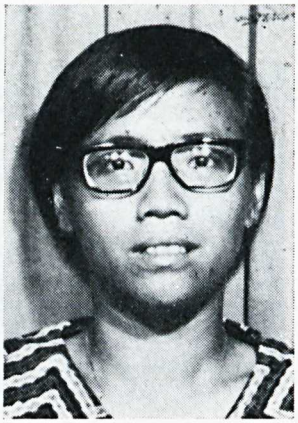
TCHUI PENG KONG
Sabah State Scholar,
P.O. Box 740,
Sandakan, Sabah.

MAHBOB AMIR
F.L.D.A. Scholar,
Balai Bomba,
Kluang, Johore.



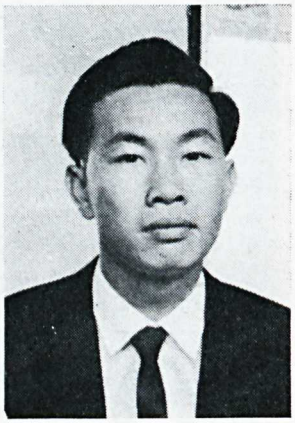
WONG KWAN YEW
Guthrie Scholar,
38184, Bryant Road,
Batu Gajah,
Perak.

LIM KIAN HONG
Private Scholar,
35, Main Street,
Triang, Pahang.

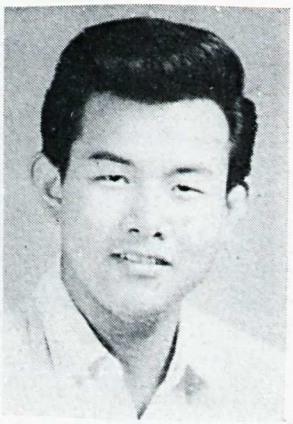


GIRLIE WONG
4, Ho Tiang Wan Road,
Penang.

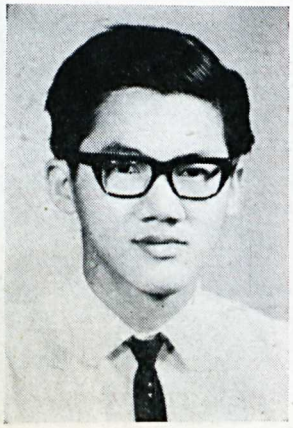
TAN MUI HENG
F.A.S. Scholar,
47, Evergreen Road,
Fettes Park, Penang.



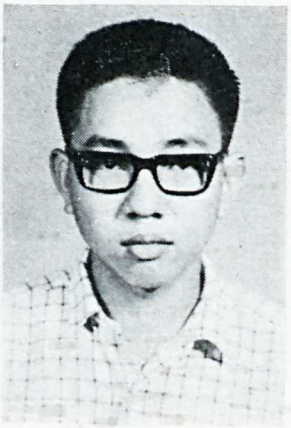
FRANCIS CHONG FU SING
I.C.I. Scholar,
P.O. Box 62,
Tawau, Sabah.



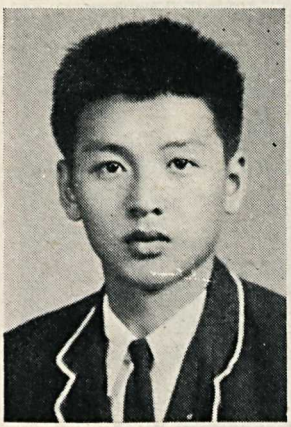
CHIN KHI FUI
(H) No. 469,
Raintree Road,
Turnbull Place,
Jesselton, Sabah.



LIM KENG HIAN
F.A.S. Scholar,
303, Pinang Tunggal,
Sungei Petani,
Kedah.



LOW AH LEK
183, Jalan Hj. Idris,
Kundang Ulu,
Muar, Johore.



PHEH TIEN TECK
Bursary Holder,
241C, Batu Ferringhi,
Penang.

AMIR HUSSIN BAHARUDIN
F.L.D.A. Scholar,
Sekolah Kebangsaan,
P. Pos Tg. Sepat,
K. Langat,
Selangor.

ABDUL HAMID AMAT
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YEOH KEAT CHOON
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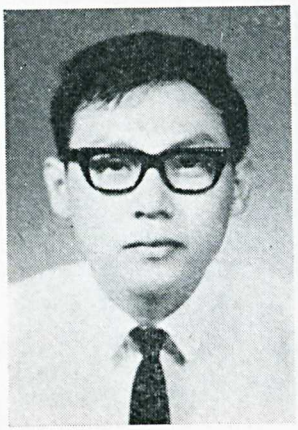
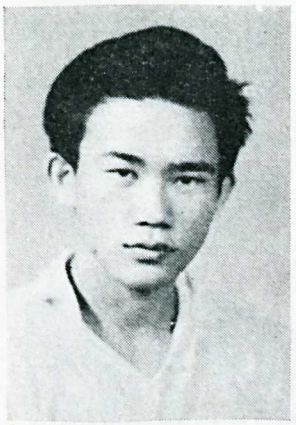
399, alan Imigeresen,
Telok Anson,
Perak.

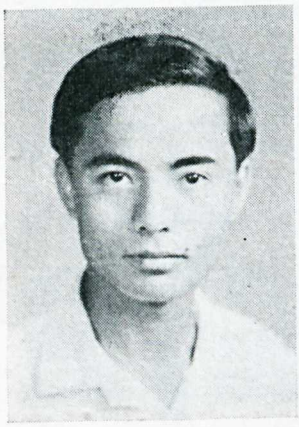
NG LIAN HUAT
Private Scholar,
1148, Permatang Kling,
Nibong Tebal,
Province Wellesley (8).



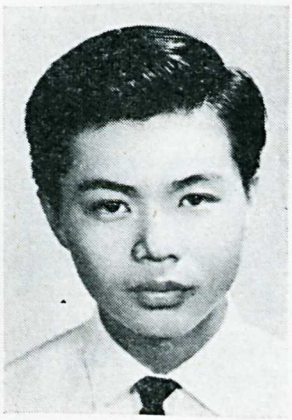
KOH BOON HUA
H & C Scholar,
4071, Bagan Luar Road,
Butterworth, P.W.



LIM JIT SAI
Pahang State Scholar,
100, Temerloh Road,
Mentakab,
Pahang.



CHUAH POH CHYE
Private Scholar,
35, Gottlieb Gardens,
Penang.



CHEW FOOK SEONG
F.L.D.A. Scholar,
15, R/Ment Area,
Batu Gajah Road,
Pusing, Perak.

LEONG TAT THIM
Guthrie Scholar,
26, Caunter Crescent,
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LEE SAI HAR
R.R.I. Scholar,
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   1260B, Jalan Sultanah Zainab, Kota Bharu.
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   BB 18, Kg. Pasir Panjang, Pekan, Pahang.
3. Abdul Rahman bin Mohd. Sidek
   Pusat Latehan Pertanian, Paya Besar, Kuantan.
4. Adam bin Amin
   Kg. Perigi Jerneh, Rembau, N. Sembilan.
5. Abdullah Ariffin bin Wan Chik
   3891, Jalan Hamzah, Kota Bharu, Kelantan.
6. Ahmad Mahir bin Mohd. Mokhtar
   400, New Pasir Puteh, Ipoh.
7. Ahmad Mahir bin Abdul Samad
   56, Gombak Setia, Kuala Lumpur.
8. Borhannudin bin Ahmad
   14/36, No. 60, Petaling Jaya, Kuala Lumpur.
9. Chang En Pau
   P.O. Box 85, Tawau, Sabah.
10. Harun bin Mukim Othman
    Kg. Berchang, Padang Tengku, K. Lipis.
11. Ideris bin Diran
12. Ismail bin Mahat,
    162, Lorong Keramat 7, Kg. Dato Keramat, K. Lumpur.
13. Jaafar bin Isa
    Pusat Perchubaan Persekutuan, Serdang, Selangor.
14. Jaafar bin Daud
    W3 207, Jln Lemal, Pasir Mas, Kelantan.
15. Justine Wences Angang
    P.O. Box 1, Kuala Penyu, Sabah.
16. Steven Kutai
    Chop Phin Heong, Inanam, Jesselton, Sabah.
17. Lo Vui Keong
    P.O. Box 316, Tawau, Sabah.
18. Mahmood bin Ahmad
    26-7, Jalan Mat Salleh, Batu Pahat, Johor.
19. Richard Majuyah
    Agricultural Hq. Jesselton, Sabah.
20. Mohammad bin Manfar
    10 Jalan Abd. Rahman, Muar, Johor.
21. Mohd. Ali bin Musa
    B6, Kg. Benta, Langgar, Pekan.
22. Mohd. Amin bin Ahmad
    26-7, Jln. Mat Salleh, Batu Pahat, Johor.
23. Mohd Hamzan bin Hj. Mohd Din
    21, Changkat Kenny, K. Lumpur.
24. Mohd Nerus bin Haji Long
    Kg. Sanggong, Temerloh, Pahang.

25. Mohd Nor bin Yusof
Kg. Kok Lanas, Kita Bharu, Kelantan.

26. Mohd Surur bin Mursidi
Parit 21, Hutan Melintang, Lower Perak.

27. Nawi bin Che Yusof
d/a Kedai Che Omar, Kubang Krian, K. Bharu.

28. Nazari bin Khalid
1A, Penang Road, Simpang Empat, Taiping.

29. Nik Mohd Arif bin Nik Sulaiman
3955-C, Jalan, Kebun Sultan, Kota Bharu.

30. Nik Mohammad bin Nik Abdul Majid
3217, Jln. Kelonchor, Kota Bharu.

31. Othman bin Awang Kechil
d/a Pusat Latehan Pertanian, Pekan, Pahang.

32. Raja Abdullah bin Raja Othman
B4/11, Jln. Syed Abu Bakar, K. Klawang, Jelebu.

33. Ramli bin Abdullah
191B, Jln. Kemunting, Chukai, Kemaman, Trengganu.

34. Shahar bin Abdul Jalil
47, Ujong Pasir, Melaka.

35. Salleh bin Kadzimin
Kg. Nyatoh, P.O. Rantau, N. Sembilan.

36. Shaari bin Shariman
Kg. Berkat Chembong, Rembau, N. Sembilan.

37. Syed Mashor bin Sayed Abdullah
c/o 29, Lorong Asma, Alor Star, Kedah.

38. Tajuddin bin Ismail
13¾, Ulu Langat, Selangor.

39. Tan Mohd Aminuddin b. Ishak
Rumah Puteh, Kg. Pantai Chenor, Temerloh.

40. Zulkifli bin Muda
510, PWD Qtrs, Jln. Tanah Puteh, Kuantan.

Names and Addresses of First Year Students — 1967/68

1. Abd. Rahman b. Syed Hj. Abd. Rashid,
22, Jalan Bunga Chempa,
Kulim, Kedah.

2. Abdul Karim b. Hassan,
1442-7, Jalan Shaw,
Kuala Lumpur.

3. Abdul Majid Azizi Asmuni,
Pusat Latehan Pertanian,
Degong, Telok Anson, Perak.

4. Azizah bt. Ibrahim,
Batu 3¼, Jalan Kuala, Alor Star,
Kedah.

5. Abdul Rahman b. Hj. Taib,
49, Bogor, Baling,
Kedah.

6. Alias b. Husin,
Solok Paya Rumput,
Batu 10¼, Tangga Batu, Melaka.

7. Abdul Rahman b. Hussin,
C21, College Road, Tanjong Malim,
Perak.

8. Abu Bakar bin Zibri,
c/o 16, Kg. Manjoi, Ipoh,
Perak.

9. Abdul Rahman b. Daud,
45-B, Jalan Kg. Besut, Tumpat,
Kelantan.

10. Abdul Rahman b. Jalil,
29, Jalan Aman,
Petaling Jaya, Selangor.

11. Abdul Rahim b. Aziz,
764, Permatang Tinggi (B),
Kepala Batas, P.W.

12. Ahmad Bakri b. Mutalib,
Batu 48, Bogor, Baling,
Kedah.

13. Amir Hasim b. Mahmood,
17¼, Masjid Tanah,
Melaka.

14. Abu Talib b. Bachik,
236, Jalan Daud,
Muar, Johore.

15. Ahmad Shamsuddin b. Mustafa,
473, Lorong Abd. Rashid,
Greentown, Ipoh, Perak.

16. Azizan b. Mustafa,
Immigration Qrts, Changlon, Jitra,
Kedah.

17. Ariffudin b. Husin,
25, Kampong Melayu, Rawang,
Selangor.

18. Abdul Latif b. Ahmad Zabidi,
Layang2 Kanan, Parit,
Perak.

19. Ali b. Hj. Hamid,
12, Sungai Baru, Kuala Kurau,
Perak.

20. Abdul Rauf b. Mohd. Yusuf,
325A, Jalan Pahang, Setapak,
Kuala Lumpur.

21. Appa Rao s/o Thathiak,
Changkat Asa Estate,
Tanjong Malim, Perak.

22. Azizi b. Alang Mohd.,
Kg. Paya Lintah, Padang Rengas,
Perak.

23. Alimat b. Kasim,
18, Jalan Durian Daun,
Melaka.

24. Abdul Salam b. Abd. Jalal,
76-4, Jalan Rahmat, Batu Pahat,
Johore.

25. Saharuddin b. Baharom,
505, Permatang Pauh,
Bukit Mertajam, P.W.

26. Chai Chin Kaw,
1220, Serdang Baru,
Selangor.

27. Eh Por s/o Eh Chuai,
c/o Penghulu Kampong Dalam,
Tumpat, Kelantan.

28. Goh Chai Lai,
d/a Pejabat Majlis Tempatan,
Jementah, Johore.

29. Hashim b. Ahmad,
621, Jalan Tunku Putra,
Telok Ayer Tawar, P.W.

30. Haron b. Othman,
Kampong Berchang,
Kuala Lipis.

31. Heah Cheng San,
384, Tanah Liat,
Bukit Mertajam.

32. Hamidah bt. Abdullah,
5th Mile, Mambau, Seremban,
Negeri Sembilan.

33. Ismail b. Idris,
Kampong Tengah, Parit,
Perak.

34. Ishak b. Hj. Ibrahim,
7¼ Milestone, Spg. Empat, Alor Star,
Kedah.

35. Ismail b. Hussein,
372F, Jalan Hajjah Rahman, Jelutong,
Penang.

36. Ibrahim b. Jendol,
Bt. 14½, Kelemak, Alor Gajah,
Melaka.

37. Jasman Hj. Md. Salleh,
Pt. 3, Kampong Api2,
Pontian, Johore.

38. Khalid b. Yaman,
Sekolah Kebangsaan Mambau,
Seremban, N.S.

39. L. Subramaniam,
Sgi. Rengam Estate, Batu 3,
Klang.

40. Liu Sin,
No. 90, Kampong B. Sekinchan,
Kuala Selangor, Selangor.

41. Loh Siew Cheng,
160, Main Road, Dungun,
Trengganu.

42. Mary Ong Tuan Chaye,
106, Main Street, Kuala Lipis,
Pahang.

43. Mohamad b. Abu Bakar,
Sekolah Kebangsaan Terap, Serdang,
Kedah.

44. Mohd. Fadzil Mohamad,
1033, Hugh Low Road,
Assam Kumbang, Taiping.

45. Mat Husain b. Suhud,
Simpang Empat, Sungai Sedaka,
Yen, Kedah.

46. Mohamud Sani,
41B, Jalan Abd. Kadir, Mentakab,
Pahang.

47. Mohd. Nasir b. Hassan,
Sekolah Kebangsaan Astana Raja,
Kota, N.S.

48. Mohd. Sharip b. Abd. Rahim,
A-20, F.L.D.A., Kampong Awah,
Temerloh, Pahang.

49. Md. Nasir b. Amirudin,
A-892, Telok Sisek Park, Kuantan,
Pahang.

50. Mustafa Kamal b. Ismail,
53, Jalan Bakau Chondong,
Batu Pahat, Johore.

51. Mostafa b. Mohd. Said,
Kampong Sepinang, Segamat,
Johore.

52. Mohamed b. Hj. Ismail,
10, Lorong Jaya, Kampong Melayu,
Majidee, Johore Bahru.

53. Mohd. Anuar b. Mahmud,
3, Laxamana Road, Telok Anson,
Perak.

54. Mohd. Azizi b. Hamid,
200, Jalan Jawa, Telok Anson,
Perak.

55. Mohd. Azubir bin Adam,
Kampong Chembong, Rembau,
Negeri Sembilan.

56. Mohd. Don b. Mastor,
52, Jalan Ungku Hussein,
Batu Pahat, Johore.

57. Mohd. Yusof b. Shafie,
L.L.N., Jalan Kapar, Klang,
Selangor.

58. Mohd. Ariffin b. H.M. Talib,
15/50, Gedong Lalang, Ampangan,
Seremban.

59. Mohd. Ismail b. Abd. Karim,
6, Market Street, Sungei Besi,
Kuala Lumpur.

60. Mohd. Dini b. Abu Bakar,
7½ m.s. Pernu, Jalan Bukit Pegoh,
Melaka.

61. Nik Hassan b. Nik Mokhtar,
c/o Yusuf Bedul, Melor,
Kelantan.

62. Mohd. Aris b. Mohd. Nor,
108, Jalan Pengkalan, Bt. Tengah,
Bt. Mertajam, P.W.

63. Ghazali b. Selamat,
Bukit Batu Bakri, Muar,
Johore.

64. Noorma bt. Osman,
59-A, Jalan Travers,
Kuala Lumpur.

65. Nuraini bt. Ibrahim,
269, Kampong Baru, Sungai Patani,
Kedah.

66. Nancy Kwan Mei,
9, Cross Street, Kuala Lipis,
Pahang.

67. Nor Azizah bt. Saleh,
347, Benus, Bentong,
Pahang.

68. Norain bt. Rejab,
378, Kampong Baru, Sungai Patani,
Kedah.

69. Nooraziah bt. Md. Nazri,
3, Jalan Sultan Yusuf, Grik,
Perak.

70. Nor Hasiah bt. Md. Hashim,
Batu 36½, Serting Ilir, Batu Kikir,
Negeri Sembilan.

71. Omar b. Ismail,
Batu 2¾, Bukit Piatu,
Melaka.

72. Onn b. Hashim,
27-A, Jalan Watson, Kg. Bahru,
Kuala Lumpur.

73. Omar b. Awang Mat,
Kg. Golok Semerak, Pasir Puteh,
Kelantan.

74. Osman b. Mohammad,
3191, Jalan Guillemard,
Kuala Lumpur.

75. Ong Siow Teck,
97, Kampong Lapan, Tranquerah Rd.,
Melaka.

76. Rosli b. Mohammad,
Batu 1, Jalan Santan, Kangar,
Perlis.

ADDITIONS

First Year

1) Azizan Haji Ismail, Kg. Paoh, Bt. Gantang, Taiping, Perak.
2) Boon Yon Nyin, 26-24, Jalan Buloh Kasap, Segamat, Johore.
3) Chan Fook Nam, 61, Station Road, Tapah, Perak.
4) Chin Kit Ling, 770, Sungei Chua, Kajang, Selangor.
5) Chong Kewi, E-14, Jalan Merdeka, Bekok, Johore.
6) Goh Ah Bah, 50, Jalan Meriam, Muar, Johore.
7) Koh Tai Tong, 87, Rembau Street, Klang, Selangor.
8) Khoo Khoon Long, 850, Bumbang Lima, Kepala Batas, P.W.
9) Kusairi Noh, 2964, Taiping Garden, Kamunting Road, Taiping, Perak.
10) Lawrence F. Gubud, c/o Agricultural Head-office, Kota Kinabalu, Sabah.
11) Md. Husain b. Menggong, Kg. Poh, Bidor, Perak.
12) Mohd. Yusoff b. Mustapha, Bt. 7¾, Salor, Kota Bahru, Kelantan.
13) Soh See Hong, T. Bg. 871, Jalan Raya Timor, Klang, Selangor.
14) Shahar Hussain, 477-B, Batu Uban, Penang.
15) Tan Cheng Han, 9, Jalan Hassan, Segamat, Johore.
16) Tan Suei, Lot 20, Brinchang, Cameron Highlands, Pahang.
17) Zainudin bin Chedah, 1489E, Wardens Qrs., Jalan Day, Alor Star, Kedah.
18) Wong Kian Liam, 33, Jalan Ibrahim, Segamat, Johore.

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1) Wong Mook Choong @ Wong Kiew Chye, 3305, Main St., Jinjang North, Kuala Lumpur.

77. Ramlie b. Md. Nor,
Batu 17½, Melekek, Alor Gajah,
Melaka.

78. Rohani bt. Saari,
336, Pekan Atap, Gurun,
Kedah.

19. Rubayah bt. Abd. Malek,
Kg. Sawah Lebar, Kuala Pilah,
Negeri Sembilan.

80. Rabirah bt. Awang,
13, Custom Barracks, Kuantan,
Pahang.

81. Ramlie b. Ahmad,
Batu 2, Ujong Pasir,
Melaka.

82. Saidin b. Teh,
E-7, Jalan Syed Hussain, Arau,
Perlis.

83. Siti Doyah bt. Osman,
361, Jalan Othman, Sungai Bakap,
Province Wellesley.

84. Siti Hajar bt. Ahmad,
c/o 16, Main Road, Chemor,
Perak.

85. Sharifah Anuralbalkis Syed Ali,
Kampong Karai, Enggor,
Perak.

86. Salmah bt. Ishak,
570, Jalan Bukit, Kuala Kangsar,
Perak.

87. Shair b. Md. Nor,
c/o Mohd. Nor, 45, River Side Road,
Sabak Bernam.

88. Silahudin Jiri,
11, Post Office Building, Kampar,
Perak.

89. Syed Burhanudin Bahadin,
Batu 2, Jalan Kaki Bukit, Kangar,
Perlis.

90. Syed Munir b. Wafa,
224, Jalan Laxamana, Assam Kumbang,
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92. Tang Sin Fah,
421A, Jalan Teo Kang Sin, Pontian,
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Perak.

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Central Police Station, Seremban,
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